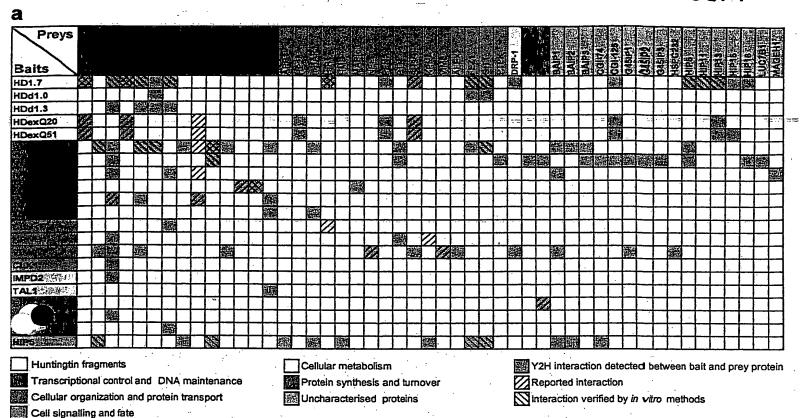


Figure 1



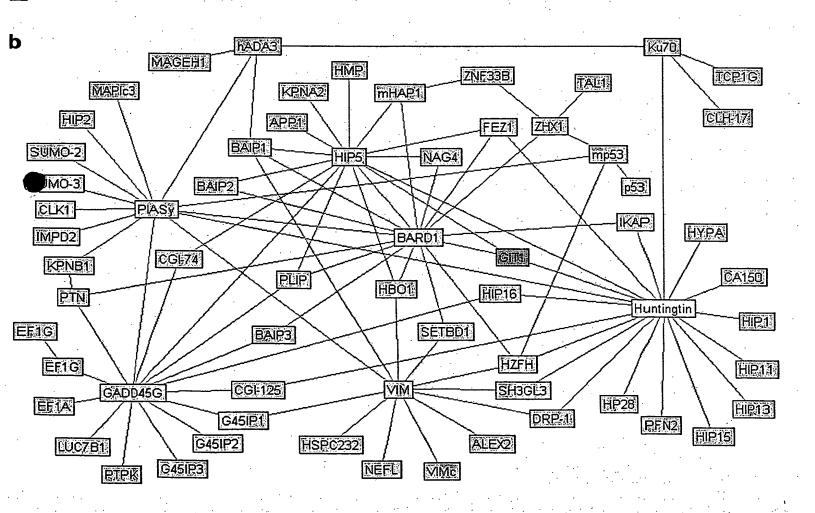
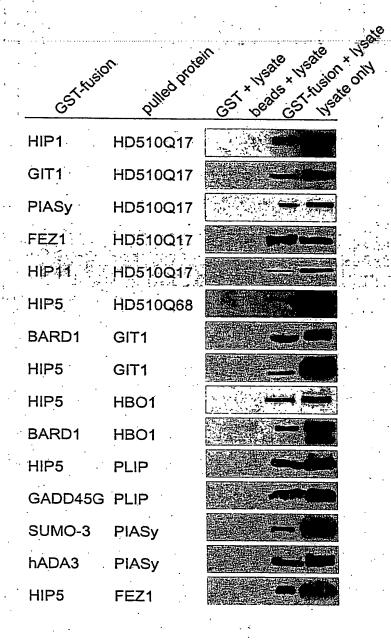
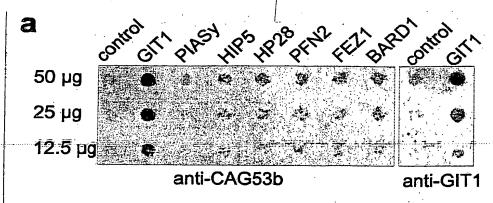
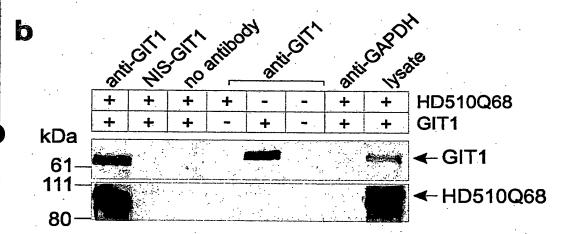


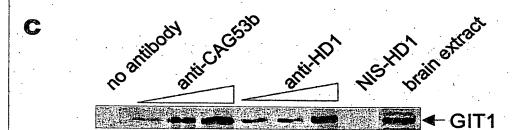
Figure 2

BEST AVAILABLE COPY









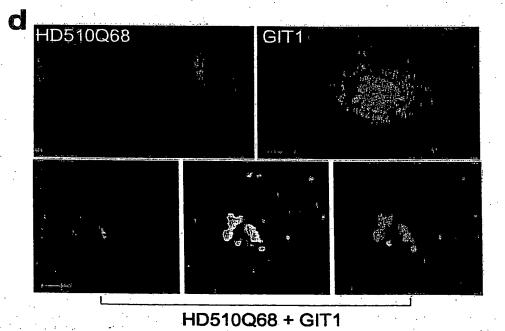


Figure 4

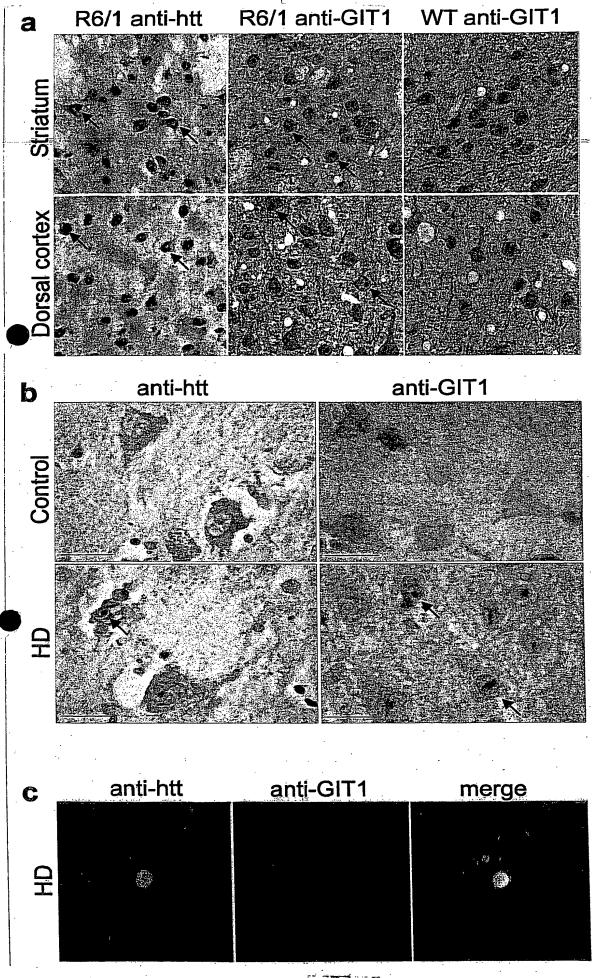


Figure 5

>ALEX2

AESVVGAAMASAIAPPPGVTEALGAAEAPAMAGAPKVAEAPREAETSRAAVPPGTVVPTEAJAPTE
VTEGPGVAAPTKVAEAPGVASPTEAAEAPVPATPTGAAAPTGAAESPGTSGSPRTAVVPGTSAAKK
ATPGAHTGAIPKATSATGAVPKGGGKGVTRSRNGGKGKGKKSKVEVDELGMGFRPGDGAAAJAAAS
ANGGQAFLAEVPDSEEGESGWTDTESDSDSEPETQRRGRGRRPVAMQKRPFPYEIDEILGVRDLRK
VLALLQKSDDPFIQQVALLTLSNNANYSCNQETIRKLGGLPIIANMINKTDPHIKEKALMAMNNLS
ENYENQGRLQVYMNKVMDDIMASNINSAVQVVGLKFLTNMTITNDYQHLLVNSIANFFRLLSQGGG
KIKVEILKILSNFAENPDMLKKLLSTQVPASFSSLYNSYVESBILINALTLFEIIYDNLRAEVFNY
REFNKGSLFYLCTTSGVCVKKIRALANHHDLLVKVKVIKLVNKF

EEEEESFPQPVDDYFVEPPQAEEEEETVPPPSSHTLAVVGKVTPTPRPTDGVDIYFGMPGEISEHE GFLRAKMDLEERRMRQINEVMREWAMADNQSKNLPKADRQALNEHFQSILQTLEEQVSGERQRLVE THATRVIALINDQRRAALEGFLAALQADPPQAERVLLALRRYLRAEQKEQRHTLRHYQHVAAVDPE KAQQMRFQVHTHLQVIEERVNQSLGLLDQNPHLAQELRPQIQELLHSEHLGPSELEAPAPGGSSED KGGLQPPDSKDDTPMTLPKGSTEQDAASPEKEKMNPLEQYERKVNASVPGVSLSTHRRFRGMSWHQLGQGCPVRLCRVC

>BAIP1

RPRTKMATAMYLEHYLDSIENLPCELQRNFQLMRELDQRTEDKKAEIDILAAEYISTVKTLSPDQR VERLQKIQNAYSKCKEYSDDKVQLAMQTYEMVDKHIRRLDADLARFEADLKDKMEGSDFESSGGRG LKKGRGQKEKRGSRGRRTSEEDTPKKKKHKGGSEFTDTILSVHPSDVLDMPVDPNEPTYCLCHQ VSYGEMIGCDNPDCPIEWFHFACVDLTTKPKGKW

>BAIP2

SQQASVTMHDVDAESFEVLVDYCYTGRVSLSEANVQRLYAASDMLQLEYVREACASFLARRLDLTN CTAILKFADAFDHHKLRSQAQSYIAHNFKQLSRMGSIREETLADLTLAQLLAVLRLDSLDIESERT VCHVAVQWLEAAAKERGPSAAEVFKCVRWMHFTEEDQDYLEGLLTKPIVKKYCLDVIEGALQMRYG DLLYKSLVPVPNSSSSSSSSNSLVSAAENPPQRLGMCAKEMVIFFGHPRDPFLCYDPYSGDIYTMP SPLTSFAHTKTVTSSAVCVSPDHDIYLAAQPRKDLWVYKPAQNSWQQLADRLLCREGMDVAYLNGY IYILGGRDPITGVKLKEVECYSVQRNQWALVAPVPHSFYSFELIVVQNYLYAVNSKRMLCYDPSHN MWLNCASLKRSDFQEACVFNDEIYCICDIPVMKVYNPARGEWRRISNIPLDSETHNYQIVNHDQKL LLITSTTPQWKKNRVTVYEYDTREDQWINIGTMLGLLQFDSGFICLCARVYPSCLEPGQSFITEED DARSESSTEWDLDGFSELDSESGSSSSFSDDEVWVQVAPQRNAQDQQGSL

>BAIP3

GHNAPRKVTAVIYARKGSVLQSIEKISSSVDATTVTSQQCVFRDQEPKIHNEMASTSDKGAQGRND KKDSQGRSNKALHLKSDAEFKKIFGLTKDLRVCLTRIPDHLTSGEGFDSFSSLVKSGTYKETEFMV KEGERKQQNFDKKRKAKTNKKMDHIKKRKTENAYNAIINGEANVTGSQLLSSILPTSDVSQHNILT SHSKTRQEKRTEMEYYTHEKQEKGTLNSNAAYEQSHFFNKNYTEDIFPVTPPELEETIRDEKIRRL KQVLREKEAALEEMRKKMHOK

>BARD1

LAGFESLTCSFPVVSRGLLASRSPRSLSSEGGTMPDNRQPRNRQPRIRSGNEPRSASAMEPDGRGA WAHSRAALDRLEKLLRCSRCTNILREPVCLGGCEHIFCSNCVSDCIGTGCPVCYTPAWIQDLKINR QLDSMIQLCSKLRNLLHDNEPSDLKEDKPRKSLFNDAGNKKNSIKMWFSPRSKKVRYVVSKASVQT QPAIKKDASAQQDSYEFVSPSPPADVSERAKKASARSGKKQKKKTLAEINQKWNLEAEKEDGEFDS KEESKQKLVSFCSQPSVISSPQINGEIDLLASGSLTESECFGSLTEVSLPLAEQIESPDTKSRNEV VTPEKVCKNYLTSKKSLPLENNGKRGHHNRLSSPISKRCRTSILSTSGDFVKQTVPSENIPLPECS SPPSCKRKVGGTSGSKTVTCPMNSLVFHQVHHLLH

QQFIPGPLKILVWPCCLFSQAPTTQDQTPSSAVSVATPTVSVSTPAPTATPVQTVPQPHPQTLPPA VPHSVPQPTTAIPAFPPVMVPPFRVPLPGMPIPLPGVLPGMAPPIVPMIHPQVAIAASPATLAGAT AVSEWTEYKTADGKTYYYNNRTLESTWEKPQELKEKEKLEEKIKEPIKEPSEEPLPMETEEEDPKE EPIKEIKEEPKEEEMTEEEKAAQKAKPVATAPIPGTPWCVVWTGDERVFFYNPTTRLSMWDRPDDL IGRADVDKIIQEPPHKKGMEELKKLRHPTPTMLSIQKWQFSMSAIKEEQELMEEINEDEPVKAKKR

K

>CGI-125

FDASARNFARVSGLLLCQAGGVLVSSFVMAAAVAMETDDAGNRLRFQLELEFVQCLANPNYLNFLA QRGYFKDKAFVNYLKYLLYWKDPEYAKYLKYPQCLHMLELLQYEHFRKELVNAQCAKFIDEQQILH WQHYSRKRMRLQQALAEQQQQNNTSGK

>CGI-74

VEKARAKKREAEEVYRNSMPASSFQQQKLRVCEVCSAYLGLHDNDRRLADHFGGKLHLGFIEIREK LEELKRVVAEKQEKRNQERLKRREEREREEREKLRRSRSHSKNPKR

>CLH-17

MAQILPIRFQEHLQLQNLGINPANIGFSTLTMESDKFICIREKVGEQAQVVIIDMNDPSNPIRRPI SADSAIMNPASKVIALKAGKTLQIFNIEMKSKMKAHTMTDDVTFWKWISLNTVALVTDNAVYHWSM EGESQPVKMFDRHSSLAGCQIINYRTDAKQKWLLLTGISAQQNRVVGAMQLYSVDRKVSQPIEGHA ASFAQFKMEGNAEESTLFCFAVRGQAGGKLHIIEVGTPPTGNQPFPKKAVDVFFPPEAQNDFPVAM QISEKHDVVFLITKYGYIHLYDLET

>CLK1

DAWVLEHLNTTDPNSTFRCVQMLEWFEHHGHICIVFELLGLSTYDFIKENGFLPFRLDHIRKMAYQ ICKSVNFLHSNKLTHTDLKPENILFVQSDYTEAYNPKIKRDERTLINPDIKVVDFGSATYDDEHHS TLVSTRHYRAPEVILALGWSQPCDVWSIGCILIEYYLGFTVFPTHDSKEHLAMMERILGPLPKHMI QKTRKRKYFHHDRLDWDEHSSAGRYVSRRCKPLKEFMLSQDVEHERLFDLIQKMLEYDPAKRITLR EALKHPFFDLLKKSI

>DRP-1

KDNFTLIPEGVNGIEERMTVVWDKAVATGKMDENQFVAVTSTNAAKIFNLYPRKGRIAVGSDADVV IWDPDKLKTITAKSHKSAVEYNIFEGMECHGSPLVVISQGKIVFEDGNINVNKGMGRFIPRKAFPE HLYQRVKIRNKVFGLQGVSRGMYDGPVYEVPATPKYATPAPSAKSSPSKHQPPPIRNLHQSNFSLS GAQIDDNNPRRTGHRIVAPPGGRSNITSLG

>EF1A

MHHEALSEALPGDNVGFNVKNVSVKDVRRGNVAGDSKNDPPMEAAGFTAQVIILNHPGQISAGYAP VLDCHTAHIACKFAELKEKIDRRSGKKLEDGPKFLKSGDAAIVDMVPGKPMCVESFSDYPPLGRFA VRDMRQTVAVGVIKAVDKKAAGAGKVTKSAQKAQKAK

>EF1G(bait)

AAGTLYTYPENWRAFKALIAAQYSGAQVRVLSAPPHFHFGQTNRTPEFLRKFPAGKVPAFEGDDGF CVFESNAIAYYVSNEELRGSTPEAAAQVVQWVSFADSDIVPPASTWVFPTLGIMHHNKQATENAKE EVRRILGLLDAYLKTRTFLVGERVTLADITVVCTLLWLYKQVLEPSFRQAFPNTNRWFLTCINQPQ FRAVLGEVKLCEKMAQFDAKKFAETQPKKDTPRKEKGSREEKQKPQAERKEEKKAAAPAPEEEMDE CEQALAAEPKAKDPFAHLPKSTFVLDEFKRKYSNEDTLSVALPYFWEHFDKDGWSLWYSEYRFPEE LTQTFMSCNLITGMFQRLDKLRKNAFASVILFGTNNSSSISGVWVFRGQELAFPLSPDWQVDYESY TWRKLDPGSEETQTLVREYFSWEGAFQHVGKAFNQGKIFK

>EF1G (prey)

AAGTLYTYPENWRAFKALIAAQYSGAQVRVLSAPPHFHFGQTNRTPEFLRKFPAGKVPAFEGDDGF CVFESNAIAYYVSNEELRGSTPEAAAQVVQWVSFADSDIVPPASTWVFPTLGIMHHNKQATENAKE EVRRILGLLDAYLKTRTFLVGERVTLADITVVCTLLWLYKQVLEPSFRQAFPNTNRWFLTCINQPQ FRAVLGEVKLCEKMAQFDAKKFAETQPKKDTPRKEKGSREEKQKPQAERKEEKKAAAPAPEEEMDE CEQALAAEPKAKDPFAHLPKSTFVLDEFKRKYSNEDTLSVALPYFWEHFDKDGWSLWYSEYRFPEE LTQTFMSCNLITGMFQRLDKLRKNAFASVILFGTNNSSSISGVWVFRGQELAFPLSPDWQVDYESY TWRKLDPGSEETQTLVREYFSWEGAFQHVGKAFNQGKIFK >FEZ1

GNCSDTEIHEKEEEEFNEKSENDSGINEEPLLTADQVIEEIEEMMQNSPDPEEEEEVLEEEDGGET SSQADSVLLQEMQALTQTFNNNWSYEGLRHMSGSELTELLDQVEGAIRDFSEELVQQLARRDELEF EKEVKNSFITVLIEVQNKQKEQRELMKKRRKEKGLSLQSSRIEKGNQMPLKRFSMEGISNILQSGI RQTFGSSGTDKQYLNTVIPYEKKASPPSVEDLQMLTNILFAMKEDNEKVPTLLTDYILKVLCPT >G45IP1

>G45IP3

MASSGGELGSLFDHHVQRAVCDTRAKYREGRRPRAVKVYTINLESQYLLIQGVPAVGVMKEL,VERF
ALYGAIEQYNALDEYPAEDFTEVYLIKFMNLQSARTAKRKMDEQSFFGGLLHVCYAPEFETVEETR
KKLQMRKAYVVKTTENKDHYVTKKKLVTEHKDTEDFRQDFHSEMSGFCKAALNTSAGNSNPYLPYS
CELPLCYFSSKCMCSSGGPVDRAPDSSKDGRNHHKTMGHYNHNDSLRKTQINSLKNSVACPGAQKA
ITSSEAVDRFMPRTTQLQERKRRREDDRKLGTFLQTNPTGNEIMIGPLLPDLSKVDMHDDSLNTTA
NLIRHKLKEVISSVPKPPEDKPEDVHTSHPLKQRRRI

RTCMPYIFSLSLEALKCFRIRNNEKMLSDSHGVETIRDILPDTSLGGPSFFKIITAKAVLKLQAGN AEEAALWRDLVRKVLASYLETAEEAVTLGGSLDENCQEVLKFATRENGFLLQYLVAIPMEKGLDSQ GCFCAGCSRQIGFSFVRPKLCAFSGLYYCDICHQDDASVIPARIIHNWDLTKRPICRQALKFLTQI RAQPLINLQMVNASLYEHVERMHLIGRRREQLKLLGDYLGLCRSGALKELSKRLNHRNYLLESPHR FSVADLQQIADGVYEGFLKALIEFASQHVYHCDLCTQRGFICQICQHHDIIFPFEFDTTVRCAECK TVFHQSCQAVVKKGCPRCARRKYQEONIFA

PNRGPLSPPNDLRPSHVISLPLHNAPHTRPTNQHTNHIPMMARCNTRKHIPRPPHTTCPKRPSIRD NPIYYLRSFFLRRIFLSLLPLQPSPYPPIRRALAPNRHHPAKSPRSPTPKHIRITRIRSINHLSSP >GADD45G

GAGAEPGLECGWSWGAKGVCRWPGLGSPPRPPAGSRSLRWLLRRMQGAGKALHELLLSAQRQGCLT AGVYESAKVLNVDPDNVTFCVLAAGEEDEGDIALQIHFTLIQAFCCENDIDIVRVGDVQRLAAIVG AGEEAGAPGDLHCILISNPNEDAWKDPALEKLSLFCEESRSVNDWVPSITLPE >GIT1

PQMADRSRQKCMSQSLDLSELAKAAKKKLQALSNRLFEELAMDVYDEVDRRENDAVWLATQNHSTL
VTERSAVPFLPVNPEYSATRNQGRQKLARFNAREFATLIIDILSEAKRRQQGKSLSSPTDNLELSL
RSQSDLDDQHDYDSVASDEDTDQEPLRSTGATRSNRARSMDSSDLSDGAVTLQEYLELKKALATSE
AKVQQLMKVNSSLSDELRRLQREIHKLQAENLQLRQPPGPVPTPPLPSERAEHTPMAPGGSTHRRD
RQAFSMYEPGSALKPFGGPPGDELTTRLQPFHSTELEDDAIYSVHVPAGLYRIRKGVSASAVPFTP
SSPLLSCSQEGSRHTSKLSRHGSGADSDYENTQSGDPLLGLEGKRFLELGKEEDFHPELESLDGDL
DPGLPSTEDVILKTEQVTKNIQELLRAAQEFKHDSFVPCSEKIHLAVTEMASLFPKRPALEPVRSS
LRLLNASAYRLQSECRKTVPPEPGAPVDFQLLTQQVIQCAYDIAKAAKQLVTITTREKKQ
>hADA3

KDVDALLKKSEAQHEQPEDGCPFGALTQRLLQALVEENIISPMEDSPIPDMSGKESGADGASTSPR NQNKPFSVPHTKSLESRIKEELIAQGLLESEDRPAEDSEDEVLAELRKRQAELKALSAHNRTKKHD LLRLAKEEVSRQELRQRVRMADNEVMDAFRKIMAARQKKRTPTKKEKDQAWKTLKERESILKLLDG >HRO1

DAERQEALGIVRRIGTDTEAATEPAGATVPAAAAARIGTVGPQPPAMPRRKRNAGSSSDGTEDSD FSTDLEHTDSSESDGTSRRSARVTRSSARLSQSSQDSSPVRNLQSFGTEEPAYSTRRVTRSQQQPT PVTPKKYPLRQTRSSGSETEQVVDFSDRETKNTADHDESPPRTPTGNAPSSESDIDISSPNVSHDE SIAKDMSLKDSGSDLSHRPKRRFHESYNFNMKCPTPGCNSLGHLTGKHERHFSISGCPLYHNLSA DECKVRAQSRDKQIEERMLSHRQDDNNRHATRHQAPTERQLRYKEKVAELRKKRNSGLSKEQKEKY MEHRQTYGNTREPLLENLTSEYDLDLFRRAQARASEDLEKLRLQGQITEGSNMIKTIAFGRYELDT WYHSPYPEEYARLGRLYMCEFCLKYMKSQTILRRHMAKCVWKHPPGDEIYRKGSISVFEVDGKKNK IYCQNLCLLAKLFLDHKTLYYDVEPFLFYVMTEADNTGCHLIGYFSKEKNSFLNYNVSCILTMPQY MRQGYGKMLIDFSYLLSKVEEKVGSPERPLSDLGLISYRSYWKEVLLRYLHNFQGKEISIKEISQE TAVNPVDIVSTLQALQMLKYWKGKHLVLKRQDLIDEWIAKEAKRSNSNKTMDPSCLKWTPPKGT

>HD1.7

PRLQLELYKEIKKNGAPRSLRAALWRFAELAHLVRPQKCRPYLVNLLPCLTRTSKRPEESVQETLA AAVPKIMASFGNFANDNEIKVLLKAFIANLKSSSPTIRRTAAGSAVSICQHSRRTQYFYSWLLNVL LGLLVPVEDEHSTLLILGVLLTLRYLVPLLQQQVKDTSLKGSFGVTRKEMEVSPSAEQLVQVYELT LHHTQHQDHNVVTGALELLQQLFRTPPPELLQTLTAVGGIGQLTAAKEESGGRSRSGSIVELIAGG GSSCSPVLSRKQKGKVLLGEEEALEDDSESRSDVSSSALTASVKDEISGELAASSGVSTPGSAGHD IITEQPRSQHTAGGLSGSGOL

>HDexQ20

MATLEKMMKAFESLKSFQQQQQQQQQQQQQQQQQQQQQQPPPPPPPPPPPPPQLPQPPQAQPLLPQP QPPPPPPPPPGPAVAEEPLHRP

>HDexQ51

ADTLQGHRDRFMEQFTKLKDLFYRSSNLQYFKRLIQIPQLPENPPNFLRASALSEHISPVVVIPAE
ASSPDSEFVLEKDDLMDMDASQQNLFDNKFDDIFGSSFSSDPFNFNSQNGVNKDEKDHLIERLYRE
ISGLKAQLENMKTESQRVVLQLKGHVSELEADLAEQQHLRQQAADDCEFLRAELDELRRQREDTEK
AQRSLSEIERKAQANEQRYSKLKEKYSELVQNHADLLRKNAEVTKQVSMARQAQVDLEREKKELED
SLERISDQGQRKTQEQLEVLESLKQELATSQRELQVLQGSLETSAQSEANWAAEFAELEKERDSLV
SGAAHREEELSALRKELQDTQLKLASTEESMCQLAKDQRKMLLVGSRKAAEQVIQDASTRP
>HIP11

VDLVTACDIRYCAQDAFFQVKEVDVGLAADVGTLQRLPKVIGNQSLVNELAFTARKMMADEALGSG LVSRVFPDKEVMLDAALALAAEISSKSPVAVQSTKVNLLYSRDHSVAESLNYVASWNMSMLQTQDL VKSVQATTENKELKTVTFSKL

>HIP13

PCCSEDTIPSQVSDYDYFSVSGDQEADQQEFDKSSTIPRNSDISQSYRRMFQAKRPASTAGLPTTL GPAMVTPGVATIRRTPSTKPSVRRGTIGAGPIPIKTPVIPVKTPTVPDLPGVLPAPPDGPEERGEH SPESPSVGEGPQGVTSMPSSMWSGQASVNPPLPGPKPSIPEEHRQAIPESEAEDQEREPPSATVSP GQIPESDPADLSPRDTPQGEDMLNAIRRGVKLKKTTTNDRSAPRFS >HIP15

IHMAPPYPNLNMIETFICQVCEETLAHSVDSLEQLTGIRMLRHLTMTIDYHTLIANYMSGFLSLLT TANARTKFHVLKMLLNLSENPAVAKKLFSAKALSIFVGLFNIEETNDNIQIVIKMFQNISNIIKSG KMSLIDDDFSLEPLISAFREFEELAKQLQAQIDNQNDPEVGQQS >HIP16

DEEERNHRQMIKEAFAGDDVIRDFLKEKREAVEASKPKDVDLTLPGWGEWGGVGLKPSAKKRRRFL IKAPEGPPRKDKNLPNVIINEKRNIHAAAHQVRVLPYPFTHHWQFERTIQTPIGSTWNTQRAFQKL TTPKVVTKPGHIINPIKAEDVGYRSSSRSDLSVIQRNPKRITTRHKKQLKKCSVD >HIP2

MANIAVQRIKREFKEVLKSEETSKNQIKVDLVDENFTELRGEIAGPPDTPYEGGRYQLEIKIPETY PFNPPKVRFITKIWHPNISSVTGAICLDILKDQWAAAMTLRTVLLSLQAILAAAEPDDPQDAVVAN QYKQNPEMFKQTARLWAHVYAGAPVSSPEYTKKIENLCAMGFDRNAVIVALSSKSWDVETATELLL SNX

>HIP5 (bait)

FLKSILKKESKYEHGYLKALIINQSFKFGNQKAAAIRDSIELTKEKGAEIPKTIKKLRWFDETSNI ENNAENSHSLKNKTGTTQQHSQQFHIQSGAGSNIISVSTCAVNSADTKKSREDSISENVTTLGGSG ADHMPLNCFIPSGYNFAKHAWPASKKEESKIPVHDDSKTKQGKPQRGRAKIIRKPGSAKVQSGFIC TNRKGAVIQPQSASKVNIFTQAQGKLIIPCPPPQSTSNIRSGKNIQVSQCQPVTPENPQNIITHNS FNSKHVLPTEHSLNQWNQESSSPLSNACSDLVTVIPSLPSYCSSECQTFAKINHSNGTQAVARQDA TLYCTQRSPVCEESYPSVTLRTAEEESVPLWKRGPNVLHQNKRATGSTVMRRKRIAETKRRNILEQ KRQNPGSVGQKYSEQINNFGQSVLLSSSEPKQTTRGTSYIEEVSDSTSEFLMAENLVKASVPEDEI LTVLNSKQIQKSNLPLNKTQQFNICTLSAEEQKILESLNDLNERLHYIQESICKNPSIKNTLQIIP LLEKREDRTSSCRDKR

>HIP5 (prey)

FLKSILKKESKYEHGYLKALIINQSFKFGNQKAAAIRDSIELTKEKGAEIPKTIKKLRWFDETSNI ENNAENSHSLKNKTGTTQQHSQQFHIQSGAGSNIISVSTCAVNSADTKKSREDSISENVTTLGGSG ADHMPLNCFIPSGYNFAKHAWPASKKEESKIPVHDDSKTKQGKPQRGRAKIIRKPGSAKVQSGFIC TNRKGAVIQPQSASKVNIFTQAQGKLIIPCPPPQSTSNIRSGKNIQVSQCQPVTPENPQNIITHNS FNSKHVLPTEHSLNQWNQESSSPLSNACSDLVTVIPSLPSYCSSECQTFAKINHSNGTQAVARQDA TLYCTQRSPVCEESYPSVTLRTAEEESVPLWKRGPNVLHQNKRATGSTVMRRKRIAETKRRNILEQ KRQNPGSVGQKYSEQINNFGQSVLLSSSEPKQTTRGTSYIEEVSDSTSEFLMAENLVKASVPEDEI LTVLNSKQIQKSNLPLNKTQQFNICTLSAEEQKILESLNDLNERLHYIQESICKNPSIKNTLQIIP LLEKREDRTSSCRDKR

>HMP

QEQVKIESLAKSLEDALRQTASVTLQAIAAQNAAVQAVNAHSNILKAAMDNSEIAGEKKSAQWRTV EGALKERKAVDEAADALLKAKEELEKMKSVIENAKKKEVAGAKPHITAAEGKLHNMIVDLDNVVK KVQAAQSEAKVVSQYHELVVQARDDFKRELDSITPEVLPGWKGMSVSDLADKLSTDDLNSLIAHAH RRIDQLNRELAEQKATEKQHITLALEKQKLEEKRAFDSAVAKALEHHRSEIQAEQDRKIEEVRDAM ENEMRTQLRRQAAAHTDHLRDVLRVQEQELKSEFEQNLSEKLSEQELQFRRLSQEQVDNFTLDINT. AYARLRGIEQAVQSHAVAEEEARKAHQLWLSVEALKYSMKTSSAETPTIPLGSAVEAIKANCSDNE FTQALTAAIPPESLTRGVYSEETLRARFYAVQKLARRVAMIDETRNSLYQYPLSYLQSLLLFPPQQLKPPPELCPEDINTFKLLSYASYCIEHGDLELAAKFVNQLKGESRRVAQDWLKEARMTLETKQIVE

>HP28

PPADSLLKYDTPVLVSRNTEKRSPKARLLKVSPQQPGPSGSAPQPPKTKLPSTPCVPDPTKQAEEI LNAILPPREWVEDTQLWIQQVSSTPSTRMDVVHLQEQLDLKLQQRQARETGICPVRRELYSQCFDE LIREVTINCAERGLLLLRVRDEIRMTIAAYQTLYESSVAFGMRKALQAEQGKSDMERKIAELETEK RDLERQVNEQKAKCEATEKRESERRQVEEKKHNEEIQFLKRTNQQLKAQLEGIIAPKK >HSPC232

RRRADGCIYGVSRRARVVAYRRDEMWSEGRYEYERIPRERAPPRSHPSDESGYRWTRDDHSASRQP EYRDMRDGFRRKSFYSSHYARERSPYKRDNTFFRESPVGRKDSPHSRSGSSVSSRSYSPERSKSYS FHQSQHRNKERPVQSLKTSRDTSPSSGSAVSSSKVLDKPSRLTEKELAEAASKWAAEKLEKSDESN LPEISEYEAGSTAPLFTDQPEEPESNTTHGIELFEDSQLTTRSKAIASKTKEIEQVYRQDCETFGM VVKMLIEKDPSLEKSIQFALRQNLHEIGERCVEELKHFIAEYDTSTQDFGEPF

>HYPA

GRRSSLSPTMRPGTGAERGGLMMGHPGMHYAPMGMHPMGQRANMPPVPHGMMPQMMPPMGGPPMG QMPGMMSSVMPGMMMSHMSQASMQPALPPGVNSMDVAAGTASGAKSMWTEHKSPDGRTYYYNTETK QSTWEKPDDLKTPAEQLLSKCPWKEYKSDSGKPYYYNSQTKESRWAKPKELEDLEGYQNTIVAGSL ITKSNLHAMIKAEESSKQEECTTTSTAPVPTTEIPTTMSTMAAAEAAAAVVAAAAAAAAAAAAANA NASTSASNTVSGTVPVVPEPEVTSIVATVVDNENTVTLSTEEQAQLTSTPAIQDQSVEVSSNTGEE TSKQETVADFTPKKEEEESQPAKKTYTWNTKEEAKQAFKELLKEKRVPSNASWEQAMKMIINDPRY SALAKLSEKKQAFNAYKVQAKKKEKKKKKK

>HZFH

HARFAEAECLAESHQHLSKESLAGNKPANAVLHKVLNQLEELLSDMKADVTRLPATLSRIPPIAAR LQMSERSILSRLASKGTEPHPTPAYPPGPYATPPGYGAAFSAAPVGALAAAGANYSQMPAGSFITA ATNGPPVLVKKEKEMVGALVSDGLDRKEPRAGEVICIDD

>IKAP

LKEGSPLEDLALLEALSEVVQNTENLKDEVYHILKVLFLFEFDEQGRELQKAFEDTLQLMERSLPE IWTLTYQQNSATPVLGPNSTANSIMASYQQQKTSVPVLDAELFIPPKINRRTQWKLSLLD >IMPD2

DFLILPGYIDFTADQVDLTSALTKKITLKTPLVSSPMDTVTEAGMAIAMALTGGIGFIHHNCTPEF QANEVRKVKKYEQGFITDPVVLSPKDRVRDVFEAKARHGFCGIPITDTGRMGSRLVGIISSRDIDF LKEEEHDCFLEEIMTKREDLVVAPAGITLKEANEILQRSKKGKLPIVNEDDELVAIIARTDLKKNR DYPLASKDAKKQLLCGAAIGTHEDDKYRLDLLAQAGVDVVVLDSSQGNSIFQINMIKYIKDKYPNL QVIGGNVVTAAQAKNLIDAGVDALRVGMGSGSICITQEVLACGRPQATAVYKVSEYARRFGVPVIA DGGIQNVGHIAKALALGASTVMMGSLLAATTEAPGEYFFSDGIRLKKYRGMGSLDAMDKHLSSQNR YFSEADKIKVAQGVSGAVQDKGSIHKFVPYLIAGIQHSCQDIGAKSLTQVRAMMYSGELKFEKRTS SAQVEGGVHSLHSYEKRLF

>KPNA2

AWALTNIASGTSEQTKAVVDGGAIPAFISLLASPHAHISEQAVWALGNIAGDGSVFRDLVIKYGAV
DPLLALLAVPDMSSLACGYLRNLTWTLSNLCRNKNPAPPIDAVEQILPTLVRLLHHDDPEVLADTC
WAISYLTDGPNERIGMVVKTGVVPQLVKLLGASELPIVTPALRAIGNIVTGTDEQTQVVIDAGALA
VFPSLLTNPKTNIQKEATWTMSNITAGRQDQIQQVVNHGLVPFLVSVLSKADFKTQKEAVWAVTNY
TSGGTVEQIVYLVHCGIIEPLMNLLTAKDTKIILVILDAISNIFQAAEKLGETEKLSIMIEECGGL
DKIEALQNHENESVYKASLSLIEKYFSVEEEEDQNVVPETTSEGYTFQVQDGAPGTFNF
>KPNB1

LAAVGLVGDLCRALQSNIIPFCDEVMQLLLENLGNENVHRSVKPQILSVFGDIALAIGGEFKKYLE VVLNTLQQASQAQVDKSDYDMVDYLNELRESCLEAYTGIVQGLKGDQENVHPDVMLVQPRVEFILS FIDHIAGDEDHTDGVVACAAGLIGDLCTAFGKDVLKLVEARPMIHELLTEGRRSKTNKAKTLATWA TKELRKLKNQA

>Ku70

KTRTFNTSTGGLLLPSDTKRSQIYGSRQIILEKEETEELKRFDDPGLMLMGFKPLVLLKKHHYLRP SLFVYPEESLVIGSSTLFSALLIKCLEKEVAALCRYTPRRNIPPYFVALVPQEEELDDQKIQVTPP GFQLVFLPFADDKRKMPFTEKIMATPEQVGKMKAIVEKLRFTYRSDSFENPVLQQHFRNLEALALD LMEPEQAVDLTLPKVEAMNKRLGSLVDEFKELVYPPDYNPEGKVTKRKHDNEGSGSKRPKVEYSEE ELKTHISKGTLGKFTVPMLKEACRAYGLKSGLKKQELLEALTKHFQD >LUC7B1

VDAVAVDAAAVSAKAEKVHELNEKIGKLLAKAEQLGAEGNVDESQKILMEVEKVRAKKKEAEEEYR NSMPASSFQQQKLRVCEVCSAYLGLHDNDRRLADHFGGKLHLGFIQIREKLDQLRKTVAEKQEKRN QDRLRREEREREERLSRRSGSRTRDRRRSRSRDRRRRRSRSTSRERRKLSRSRSRDRHRRHRSRS RSHSRGHRRASRDRSAKYKFSRERASREESWESGRSERGPPDWRLESSNGKMASRRSEEKEAGEI >MAGEH1

ASFPRTAVSFEPLAGDMPRGRKSRRRRNARAAEENRNNRKIQASEASETPMAASVVASTPEDDLSG PEEDPSTPEEASSTAQAQKPSVPRSNFQGTKKSLLMSILALIFIMGNSAKEALVWKVLG KLGMQPGRQHSIFGDPKKIVTEEFVRRGYLIYKPVPRSSPVEYEFFWGPRAHVESSKLKVMHFVAR VRNRCSKDWPCNYDWDSDDDAEVEAILNSGARGYSAP >MAP11c3

QRRSFADRCKEVQQIRDQHPSKIPVIIERYKGEKQLPVLDKTKFLVPDHVNMSELVKIIRRRLQLN PTQAFFLLVNQHSMVSVSTPIADIYEQEKDEDGFLYMVYASQETFGF >mHAP1

PKEQVQSGAGDGTGSGDPAAGTPTTQPAVGPAPEPSAEPKPAPAQGTGSGQKSGSRTKTGSFCRSM IIGDSDAPWTRYVFQGPYGPRATGLGTGKAEGIWKTPAAYIGRRPGVSGPERAAFIRELQEALCPN PPPTKKITEDDVKVMLYLLEEKERDLNTAARIGQSLVKQNSVLMEENNKLETMLGSAREEILHLRK QVNLRDDLLQLYSDSDDDDDEEDEEDEEEGEEEREGQRDQDQQHDHPYGAPKPHPKAETAHRCPQ LETLQQKLRLLEEENDHLREEASHLDNLEDEEQMLILECVEQFSEASQQMAELSEVLVLRLEGYER QQKEITQLQAEITKLQQRCQSYGAQTEKLQQMLASEKGIHSESLRAGSYMQDYGSRPRDRQEDGKS HRQRSSMPAGSVTHYGYSVPLDALPSFPETLAEELRTSLRKFITDPAYFMERRDTHCREGRKKEQR AMPPPPAX

>mp53

VTETPGPVAPAPATPWPLSSFVPSQKTYQGNYGFHLGFLQSGTAKSVMCTYSPPLNKLFCQLAKTC PVQLWVSATPPAGSRVRAMAIYKKSQHMTEVVRRCPHHERCSDGDGLAPPQHLIRVEGNLYPEYLE DRQTFRHSVVVPYEPPEAGSEYTTIHYKYMCNSSCMGGMNRRPILTIITLEDSSGNLLGRDSFEVR VCACPGRDRRTEEENFRKKEVLCPELPPGSAKRALPTCTSASPPQKKKPLDGEYFTLKIRGRKRFE MFRELNEALELKDAHATEESGDSRAHSSYLKTKKGQSTSRHKKTMVKKVGPDSD

RDRVENEAEKDLQCHAPVRLDLPPEKPLTSSLAKQEEVEQTPLQEALNQLMRQLQRKDPSAFFSFP
VTDFIAPGYSMIIKHPMDFSTMKEKIKNNDYQSIEELKDNFKLMCTNAMIYNKPETIYYKAAKKLL
HSGMKILSQERIQSLKQSIDFMADLQKTRKQKDGTDTSQSGEDGGCWQREREDSGDAEAHAFKSPS
KENKKKDKDMLEDKFKSNNLEREQEQLDRIVKESGGKLTRRLVNSQCEFERRKPDGTTTLGLLHPV
DPIVGEPGYCPVRLGMTTGRLQSGVNTLQGFKEDKRNKVTPVLYLNYGPYSSYAPHYDSTFANISK
DDSDLIYSTYGEDSDLPSDFSIHEFLATCQDYPYVMADSLLDVLTKGGHSRTLQEMEMSLPEDEGH
TRTLDTAKEMEITEVEPPGRLDSSTQDRLIALKAVTNFGVPVEVFDSEEAEIFQKKLDETTRLLRE
LQEAQNERLSTRPPPNMICLLGPSYREMHLAEQVTNNLKELAQQVTPGDIVSTYGVRKAMGISIPS
PVMENNFVDLTEDTEEPKKTDVAECGPGGS

LSPLSSLSGLPPPPRAGEPPAATMSSFSYEPYYSTSYKRRYVETPRVHISSVRSGYSTARSAYSSY SAPVSSSLSVRRSYSSSSGSLMPSLENLDLSQVAAISNDLKSIRTQEKAQLQDLNDRFASFIERVH ELEQQNKVLEAELLVLRQKHSEPSRFRALYEQEIRDLRLAAEDATNEKQALQGEREGLEETLRNLQ ARYEEEVLSREDAEGRLMEARKGADEAALARAELEKRIDSLMDEISFLKKVHEEEIAELQAQIQYA QISVEMDVTKPDLSAALKDIRAQYEKLAAKNMQNAEEWFKSRFTVLTESAAKNTDAVRAAKDEVSE SRRLLKAKTLEIEACRGMNEALEKQLQELEDKQNADISAMQDTINKLENBLRTTKSEMARYLKEYQ DLLNVKMALDIEIAAYRKLLEGEETRLSFTSVGSITSGYSQSSQVFGRSAYGGLQTSSYLMSTRSF PSYYTSHVQEEQIEVEETIEAAKAEEAKDEPPSEGEAEEEEKDKEEAEEEEAAEEEEAAKEESEEA KEEEEGGEGEEGEETKEAEEEEKKVEGAGEEQAAKKKD

MEEPQSDPSVEPPLSQETFSDLWKLLPENNVLSPLPSQAMDDLMLSPDDIEQWFTEDPGPDEAPRM PEAAPPVAPAAPTPAAPAPAPSWPLSSSVPSQKTYQGSYGFRLGFLHSGTAKSVTCTYSPALNK MFCQLAKTCPVQLWVDSTPPPGTRVRAMAIYKQSQHMTEVVRRCPHHERCSDSDGLAPPQHLIRVE GNLRVEYLDDRNTFRHSVVVPYEPPEVGSDCTTIHYNYMCNSSCMGGMNRRPILTIITLEDSSGNLLGRNSFEVRVCACPGRDRRTEEENLRKKGEPHHELPPGSTKRALPNNTSSSPQPKKKPLDGEYFTLQIRGRERFEMFRELNEALELKDAQAGKEPGGSRAHSSHLKSKKGQSTSRHKKLMFKTEGPDSD

.....

>PFN2

APRRPRCSAKGSKMAGWQSYVDNLMCDGCCQEAAIVGYCDAKYVWAATAGGVFQSITPIEIDMIVG ${\tt KDREGFFINGLTLGAKKCSVIRDSLYVDGDCTMDIRTKSQGGEPTYNVAVGRAGRVLVFVMGKEGV}$ HGGGLNKKAYSMAKYLRDSGF

>PIASy(bait)

LVEAKNMVMSFRVSDLOMLLGFVGRSKSGLKHELVTRALQLVQFDCSPELFKKTKELYETRYAKKN SEPAPOPHRPLDPLTMHSTYDRAGAVPRTPLAGPNIDYPVLYGKYLNGLGRLPAKTLKPEVRLVKL PFFNMLDELLKPTELVPQNNEKLQESPCIFALTPRQVELIRNSRELQPGVKAVQVVLRICYSDTSC PQEDQYPPNIAVKVNHSYCSVPGYYPSNKPGVEPKRPCRPINLTHLMYLSSATNRITVTWGNYGKS YSVALYLVRQLTSSELLQRLKTIGVKHPELCKALVKEKLRLDPDSEIATTGVRVSLICPLVKMRLS VPCRAETCAHLQCFDAVFYLQMNEKKPTWMCPVCDKPAPYDQL1IDGLLSKILSECEDADEIEYLV DGSWCPIRAEKERSCSPQGAILVLGPSDANGLLPAPSVNGSGALGSTGGGGPVGSMENGKPGADVV DLTLDSSSSSEDEEEEEEEEEDEDEEGPRPKRRCPFQKGLVPAC

>PIASy(prey)

LVEAKNMVMSFRVSDLQMLLGFVGRSKSGLKHELVTRALQLVQFDCSPELFKKIKELYETRYAKKN SEPAPQPHRPLDPLTMHSTYDRAGAVPRTPLAGPNIDYPVLYGKYLNGLGRLPAKTLKPEVRLVKL PFFNMLDELLKPTELVPQNNEKLQESPCIFALTPRQVELIRNSRELQPGVKAVQVVLRICYSDTSC PQEDQYPPNIAVKVNHSYCSVPGYYPSNKPGVEPKRPCRPINLTHLMYLSSATNRITVTWGNYGKS YSVALYLVRQLTSSELLQRLKTIGVKHPELCKALVKEKLRLDPDSEIATTGVRVSLICPLVKMRLS VPCRAETCAHLQCFDAVFYLQMNEKKPTWMCPVCDKPAPYDQLIIDGLLSKILSECEDADEIEYLV DGSWCPIRAEKERSCSPQGAILVLGPSDANGLLPAPSVNGSGALGSTGGGGPVGSMENGKPGADVV DLTLDSSSSSEDEEEEEEEEEDEDEEGPRPKRRCPFQKGLVPAC . >PLIP

GEIIEGCRLPVLRRNQDNEDEWPLAEILSVKDISGRKLFYVHYIDFNKRLDEWVTHERLDLKKIQF PKKEAKTPTKNGLPGSRPGSPEREVKRKVEVVSPATPVPSETAPASVFPQNGAARRAVAAQPGRKR KSNCLGTDEDSQDSSDGIPSAPRMTGSLVSDRSHDDIVTRMKNIECIELGRHRLKPWYFSPYPQEL TTLPVLYLCEFCLKYGRSLKCLQRHLTKCDLRHPPGNEIYRKGTISFFEIDGRKNKSYSQNLCLLA KCFLDHKTLYYDTDPFLFYVMTEYDCKGFHIVGYFSKEKESTEDYNVACILTLPPYQRRGYGKLLI EFSYELSKVEGKTGTPEKPLSDLGLLSYRSYWSQTILEILMGLKSESGERPQITINEISEITSIKK EDVISTLQYLNLINYYKGQYILTLSEDIVDGHERAMLKRLLRIDSKCLHFTPKDWSKRGKW >PTN

LSQRQDQVPRLPVQKSRQESPRAEENPKWREGKKETSESSVQKAGRAAAAQAGAAASRVPGLSGSN LAPCNKGRLSAREDVSNSKMQAQQYQQQRRKFAAAFLAFIFILAAVDTAEAGKKEKPEKKVKKSDC GEWQWSVCVPTSGDCGLGTREGTRTGAECKQTMKTQRCKIPCNWKKQFGAECKYQFQAWGECDLNT ALKTRTGSLKRALHNAECQKTVTISKPCGKLTKPKPQAESKKKKKEGKKQEKMLD >PTPK

SNYINAALMDSYRQPAAFIVTQYPLPNTVKDFWRLVYDYGCTSIVMLNEVDLSQGCPQYWPEEGML RYGPIQVECMSCSMDCDVINRIFRICNLTRPQEGYLMVQQFQYLGWASHREVPGSKRSFLKLILQV EKWQEECEEGEGRTIIHCLNGGGRSGMFCAIGIVVEMVKRQNVVDVFHAVKTLRNSKPNMVEAPEQ YRFCYDVALEYLESS

>SETBD1

KASTSGLGIKDEGDIKQAKKEDTDDRNKMSVVTESSRNYGYNPSPVKPEGLRRPPSKTSMHQSRRL ${\tt MASAQSNPDDVLTLSSSTESEGESGTSRKPTAGQTSATAVDSDDIQTISSGSEGDDFEDKKNMTGP}$ MKRQVAVKSTRGFALKSTHGIAIKSTNMASVDKGESAPVRKNTRQFYDGEESCYIIDAKLEGNLGR YLNHSCSPNLFVQNVFVDTHDLRFPWVAFFASKRIRAGTELTWDYNYEVGSVEGKELLCCCGAIEC

.>SH3GL3

VAGLKKOFHKASQLFSEKISGAEGTKLDDEFLDMERKIDVTNKVVAEILSKTTEYLQPNPAYRAKL GMLNTVSKIRGQVKTTGYPQTEGLLGDCMLKYGKELGEDSTFGNALIEVGESMKLMAEVKDSLDIN VKQTFIDFLQLLQDKDLKEIGHHLKKLEGRRLDYDYKKKRVGKIPDEEVRQAVEKFEESKELAERS MFNFLENDVEQVSQLAVFIEAALDYHRQSTEILQELQSKLQMRISAASSVPRREYKPRPVKRSSSE LNGVSTTSVVKTTGSNIPMDQPGCRGLYDFEPENQGELGFKEGDITTLTNQTDENWYEGMTHGESG FFPINYVEVIVPLPQ

>SUMO-2

RPRAQLERESGAESVTRPLRAASPAPPPRAARAMSEEKPKEGVKTENDHINLKVAGQDGSVVQF KIKRHTPLSKLMKAYCERQGLSMRQIRFRFDGQPINETDTPAQLEMEDEDTIDVFQQQTGGVPESS LAGHSF

>SUMO-3

PSSTAAASFFCRSWCCLCARLVRTWYLFCEAAAEETPALAMADEKPKEGVKTENNDHINLKVAGQD GSVVQFKIKRHTPLSKLMKAYCERQGLSMRQIRFRFDGQPINETDTPAQLEMEDEDTIDVFQQQTG GVY

>TAL1

SSPVKRQRMESALDQLKQFTTVVADTGDFHAIDEYKPQDATTNPSLILAAAQMPAYQELVEEAIAY GRKLGGSQEDQIKNAIDKLFVLFGAEILKKIPGRVSTEVDARLSFDKDAMVARARRLIELYKEAGI SKDRILIKLSSTWEGIQAGKELEEQHGIHCNMTLLFSFAQAVACAEAGVTLISPFVGRILDWHVAN TDKKSYEPLEDPGVKSVTKIYNYYKKFSYKTIVMGASFRNTGEIKALAGCDFLTISPKLLGELIQD NAKLVPVLSAKAAQASDLEKIHLDEKSFRWLHNEDQMAVEKLSDGIRKFAADAVKLERMLTERMFN AENGK

>TCPG

QTDIEITREEDFTRILQMEEEYIQQLCEDIIQLKPDVVITEKGISDLAQHYLMRANITAIRRVRKT DNNRIARACGARIVSRPEELREDDVGTGAGLLEIKKIGDEYFTFITDCKDPKACTILLRGASKEIL SEVERNLQDAMQVCRNVLLDPQLVPGGGASEMAVAHALTEKSKAMTGVEQWPYRAVAQALEVIPRT LIQNCGASTIRLLTSLRAKHTQENCETWGVNGETGTLVDMKELGIWEPLAVKLQTYKTAVETAVLL LRIDDIVSGHKKKGDDQSRQGGAPDAGQE

>VIM

SPRQRRSRAPTTHTHRALVRLFSGSQSAPPPPPRPSPPSAAMSTRSVSSSSYRRMFGGPGTASRPS SSRSYVTTSTRTYSLGSALRPSTSRSLYASSPGGVYATRSSAVRLRSSVPGVRLLQDSVDFSLÄDA INTEFKNTRTNEKVELQELNDRFANYIDKVRFLEQQNKILLAELEQLKGQGKSRLGDLYEEEMREL RRQVDQLTNDKARVEVERDNLAEDIMRLREKLQEEMLQREEAENTLQSFRQDVDNASLARLDLERK VESLQEEIAFLKKLHEEEIQELQAQIQEQHVQIDVDVSKPDLTAALRDVRQQYESVAAKNIQEAEE WYKSKFADLSEAANRNNDALRQAKQESTEYRRQVQSLTCEVDALKGTNESLERQMREMEENFAVEA ANYQDTIGRLQDEIQNMKEEMARHLREYQDLLNVKMALDIEIATYRKLLEGEESRISLPLPNFSSL NLRETNLDSLPLVDTHSKRTLLIKTVETRDGQVINETSQHHDDLE >VIMC

QEEMLQREEAENTLQSFRQDVDNASLARLDLERKVESLQEEIAFLKKLHEEEIQELQAQIQEQHVQ IDVDVSKPDLTAALRDVRQQYESVAAKNLQEAEEWYKSKFADLSEAANRNNDALRQAKQESTEYRR QVQSLTCEVDALKGTNESLERQMREMEENFAVEAANYQDTIGRLQDEIQNMKEEMARHLREYQDLL NVKMALDIEIATYRKLLEGEESRISLPLPNFSSLNLRETNLDSLPLVDTHSKRTLLIKTVETRDGQ VINETSOHHDDLE

>ZHX1

EQTINDLTFDGSFVKEENAEQAESTEVSSSGISISKTPIMKMMKNKVENKRIAVHHNSVEDVPEEK ENEIKPDREEIVENPSSSASESNTSTSIVNRIHPSTASTVVTPAAVLPGLAQVITAVSAQQNSNLI PKVLIPVNSIPTYNAALDNNPLLLNTYNKFPYPTMSEITVLSAQAKYTEEQIKIWFSAQRLKHGVS WTPEEVEEARRKQFNGTVHTVPQTITVIPTHISTGSNGLPSILQTCQIVGQPGLVLTQVAGTNTLP VTAPIALTVAGVPSQNNIQKSQVPAAQPTAETKPATAAVPTSQSVKHETALVNPDSFGIRAKKTKE QLAELKVSYLKNQFPHDSEIIRLMKITGLTKGEIKKWFSDTRYNQRNSKSNQCLHLNNDSSTTIII DSSDETTESPTVGTAQPKQSWNPFPDFTPQKFKEKTAEQLRVLQASFLNSSVLTDEELNRLRAQTK LTRREIDAWFTEKKKSKALKEEKMEIDESNAGSSKEEAGETSPADESGAPKSGSTGKICKKTPEQLHMLKSAFVRTQWPSPEEYDKLAKESGLARTDIVSWFGDTRYAWKNGNLKWYYYYQSANSSSMNGLS SLRKRGRGRPKGRGRPRGRPRGSKRINNWDRGPSLIKFKTGTAILKDYYLKHKFLNEQDLDELV NKSHMGYEQVREWFAERQRRSELGIELFEENEEEDEVIDDQEEDEEETDDSDTWEPPRHVKRKLSK SDD

>ZNF33B

CYECGKTFCLKSDLTIHQRTHTGEKPFACPECGKFFSHKSTLSQHYRTHTGEKPYECHECGKIFYN KSYLTKHNRTHTGEKPYECNECGKTFCQKSQLTQHQRIHIGEKPYECNECGKAFCHKSALIVHQRT HTQEKPYKCNECGKSFCVKSGLILHERKHTGEKPYECNECGKSFSHKSSLTVHYRAHTGEKSCQCN ECGKIFYRKSDLAKHQRSHTGEKPYECNTCRKTFSQKSNLIVHQRTHIGEKPYE

>ALEX2

GCCGAATCAGTAGTTGGGGCTGCAATGGCTTCTGCAATAGCACCACCTCCCGGGGTGACACAGGGCC CTTGGGGCTGCAGAGCCCCTGCAATGGCAGGGGCTCCCAAAGTGGCAGAAGCTCCCAGAGAAGCG GAGACTTCCAGGGCAGCGGTGCCTCCTGGGACAGTGGTGCCTACCGAAGCGGCAGCACCCACTGAG GTGACCGAGGGTCCTGGGGTAGCAGCACCTACCAAGGTAGCTGAAGCTCCCGGGGTGGCATCGCCT ACCGAGGCAGCTGAGGCTCCTGTGCCCGCAACGCCTACTGGGGCTGCAGCACCTACTGGGGCTGCA GAGTCTCCTGGAACTTCTGGTTCCCCTAGAACAGCGGTGGTTCCTGGAACATCAGCTGCCAAGAAA GCAACCCCTGGGGCTCACACTGGGGCTATACCGAAAGCCACATCAGCGACTGGAGCGGTACCCAAA GGTGGAGGCAAGGGTGTAACCAGGTCCCGGAATGGGGGCAAGGGCCAAGGAAAAGCAAAGTT GAAGTAGACGAACTGGGGATGGGCTTCCGTCCTGGAGATGGGGCTGCAGCAGCTGCTGCAGCCTCT GCTAATGGCGGACAGGCTTTCCTGGCAGAGGTCCCTGATTCTGAGGAAGGGGAGTCCGGGTGGACT GCCATGCAGAAGCGCCCCTTTCCTTATGAAATTGATGAGATTCTGGGTGTCCGCGATCTCAGGAAG GTCCTTGCCTTGCTTCAGAAATCTGATGATCCTTTCATCCAACAGGTAGCTTTGCTCACTCTGAGC AACAATGCCAATTATTCATGCAATCAAGAGACAATCCGCAAATTGGGAGGCCTCCCAATTATTGCA AACATGATCAACAAAACTGATCCACACATTAAGGAAAAAGCCTTAATGGCCATGAATAACCTGAGT GAGAATTATGAAAATCAGGGCCGGCTTCAGGTGTACATGAATAAAGTGATGGTGATATCATGGCC GACTACCAACACCTGCTTGTCAATTCCATTGCAAACTTTTTCCGTTTGCTATCTCAGGGAGGTGGA AAAATCAAGGTTGAGATTTTGAAAATCCTTTCGAATTTTGCTGAAAATCCAGATATGTTGAAGAAA CTTCTCAGTACCCAAGTGCCAGCATCATTTAGTTCCCTCTATAATTCTTACGTGGAATCAGAAATC CTTATTAATGCCCTTACTCTATTTGAGATTATCTATGACAATCTCAGAGCAGAAGTGTTTAACTAT AGAGCCTTAGCAAATCACCATGACCTCTTAGTGAAAGTGAAAGTTATAAAACTAGTGAACAAATTC >APP1

GAGGAAGAGGAGGAATCCTTCCCACAGCCAGTAGATGATTACTTCGTGGAGCCTCCGCAGGCTGAA GAGGAAGAGGAAACGGTCCCACCCCCAAGCTCCCATACACTTGCAGTGGTCGGCAAAGTCACTCCC ${ t ACCCCGAGGCCCACAGACGGTGTGGATATTTACTTTGGCATGCCTGGGGAAATCAGTGAGCACGAG}$ GGGTTCCTGAGGGCCAAGATGGACCTGGAGGAGCGTAGGATGCGCCAGATTAATGAGGTGATGCGT CACTTCCAGTCCATTCTGCAGACTCTGGAGGAGCAGGTGTCTGGTGAGCGACAGCGCCTGGTGGAA ACCCACGCCACCCGCGTCATCGCCCTTATCAACGACCAGCGCCGGGCTGCCTTGGAGGGCTTCCTG GCAGCCCTGCAGGCAGATCCGCCTCAGGCGGAGCGTGTCCTGTTGGCCCTGCGGCGCTACCTGCGT GCGGAGCAGAAGGAACAGAGGCACACGCTGCGCCACTACCAGCATGTGGCCGCCGTGGATCCCGAG AAGGCACAGCAGATGCGCTTCCAGGTGCATACCCACCTTCAAGTGATTGAGGAGAGGGTGAATCAG AGCCTGGGCCTGCTTGACCAGAACCCCCACCTGGCTCAGGAGCTGCGGCCCCAAATCCAGGAACTC CTCCACTCTGAACACCTGGGTCCCAGTGAATTGGAAGCCCCTGCCCCTGGGGGGCAGCAGCGAGGAC $\mathtt{AAGGGTGGGCTGCAGCCTCCAGATTCCAAGGATGACACCCCCATGACCCTTCCAAAAGGGTCCACA}$ GAACAAGATGCTGCATCCCCTGAGAAAGAGAAGATGAACCCGCTGGAACAGTATGAGCGAAAGGTG AATGCGTCTGTTCCAGGGGTTTCCCTTTCCACTCATCGGAGATTCAGAGGGATGAGCTGGCACCAG CTGGGACAGGGTGTCCCGTGAGGCTGTGTCGGGTCTGC

>BAIP1

CGGCCGCGGACGAAGATGGCGACCGCCATGTACTTGGAGCACTATCTGGACAGTATCGAGAACCTT
CCCTGCGAACTTCAGAGGAACTTCCAGCTGATGCGAGAGCTGGACCAGAGGACGGAAGATAAGAA
GCAGAGATTGACATCCTGGCTGCAGAGTACATCTCCACGGTGAAGACGCTGTCTCCAGACCAGCGC
GTGGAGCGCCTGCAGAAGATCCAGAACGCCTACAGCAAGTGCAAGGAATACAGTGACGACCAAAGTG
CAGCTGGCCATGCAGACCTACGAGATGGTGGATAAACACATTCGAAGGCTTGATGCAGACCTGGCG
CGCTTTGAAGCAGATCTGAAGGACAAGATGGAGGGCAGCGATTTTGAAAGCTCCGGAGGGCGAGGC
TTAAAAAAAAGGCCGGGGTCAGAAAGAAAAAAAGAGGGTCCCGGGGCCGAGGCAGGAGACATCAGAG
GAAGACACACCAAAGAAAAAAAGAAGAAGGAGGTCTGAGTTCACTTGACCACCATCCTGTCCGTG
CACCCCTCTGATGTGCTGGACATGCCCGTGGACCCAAACGAACCCAATTGAGTGCTTTTGCC
TGCGTGGACCTTACCACGAAACCAAACGAAACTG

>BAIP2

AGCCAGCAGGCCAGCGTGACCATGCACGATGTGGACGCCGAGTCCTTCGAGGTGTTGGTCGACTAC TGCTACACGGGTCGTGTCTCTCAGTGAGGCCAATGTGCAGCGCCTGTACGCGGCCTCCGACATG CTACAGCTGGAATATGTGCGGGAAGCCTGTGCCTCCTTCTTAGCCCGACGTCTTGACCTGACCAAC TGCACCGCCATCCTCAAGTTTGCAGACGCCTTCGACCATCACAAGCTTCGATCTCAGGCCCAGTCC TACATAGCTCACAACTTCAAGCAGCTCAGCCGAATGGGTTCAATTCGGGAGGAGACTCTAGCAGAT CTAACCCTGGCCCAGCTGCTGGCTGTCCTACGCCTGGATAGTCTGGACATAGAGAGTGAGCGGACT GTATGCCATGTAGCTGTGCAGTGGCTGGAGGCTGCTAAAGAGCGGGGTCCCAGTGCTGCAGAA GTCTTCAAGTGCGTGCGCTGGATGCACTTCACTGAAGAGGATCAGGACTACTTAGAAGGGCTGCTG ACCAAGCCCATCGTGAAGAAGTACTGCCTGGACGTTATTGAAGGGGCCCTGCAGATGCGCTATGGT GACCTGTTGTACAAGTCTCTGGTGCCAGTGCCAAACAGCAGCAGCAGCAGCAGCAGCAACTCT CTTGTATCTGCAGCAGAAAATCCACCCCAGAGACTGGGTATGTGTGCCAAGGAGATGGTGATCTTC TTTGGACATCCTAGAGATCCCTTTCTCTGCTATGACCCTTACTCGGGGGACATTTACACAATGCCA CATGACATCTATCTAGCTGCTCAGCCCAGGAAAGACCTCTGGGTGTATAAACCAGCTCAGAATAGT TGGCAGCAACTTGCAGATCGCTTGCTGTGTCGTGAGGGCATGGATGTGGCATATCTCAATGGCTAC GTTCAGAGAAACCAGTGGGCATTGGTGGCTCCTGTCCCTCATTCCTTCTATTCCTTTGAACTCATA GTGGTTCAGAACTATCTTTATGCTGTCAACAGTAAGCGCATGCTTTGCTATGATCCTAGCCACAAT ATGTGGCTGAACTGTGCTTCTCTTAAACGTAGTGACTTTCAGGAAGCATGTGTCTTCAATGATGAA ATCTATTGTATCTGTGACATCCCAGTCATGAAGGTCTACAACCCAGCTAGGGGGAGAATGGAGGCGG ATTAGTAATATTCCTTTGGATTCAGAGACCCACAACTACCAGATTGTCAATCATGACCAAAAGTTG CTTCTCATCACTTCTACAACCCCACAATGGAAAAAGAACCGAGTGACAGTGTATGAGTATGATACT AGGGAAGATCAGTGGATTAATATAGGTACCATGTTAGGCCTTTTGCAGTTTGACTCTGGCTTTATT TGCCTTTGTGCTCGTGTTTATCCTTCCTGCCTTGAACCTGGTCAGAGTTTTATTACTGAGGAAGAT GATGCACGGAGTGAGTCTAGTACTGAATGGGACTTAGATGGATTCAGTGAGCTGGACTCTGAGTCA GGAAGTTCAAGTTCTTTTTCAGATGATGAAGTCTGGGTGCAAGTAGCACCTCAGCGAAATGCACAG GATCAGCAGGGTTCTTTG

>BAIP3

TTGGCCGGTTTCGAGTCGCTGACCTGCAGCTTCCCTGTGGTTTCCCGAGGCCTCCTTGCTTCCCGC TCTCCGAGGAGCCTTTCATCCGAAGGCGGGACGATGCCGGATAATCGGCAGCCGAGGAACCGGCAG CCGAGGATCCGCTCCGGGAACGAGCCTCGTTCCGCGTCCGCCATGGAACCGGATGGTCGCGGTGCC TGGGCCCACAGTCGCGCCGCGCTCGACCGCCTGGAGAAGCTGCTGCGCTGCTCGCGTTGTACTAAC ATTCTGÅGAGAGCCTGTGTTTTAGGAGGATGTGAGCACATCTTCTGTAGTAATTGTGTAAGTGÁC TGCATTGGAACTGGATGTCCAGTGTGTTACACCCCGGCCTGGATACAAGACTTGAAGATAAATAGA CAACTGGACAGCATGATTCAACTTTGTAGTAAGCTTCGAAATTTGCTACATGACAATGAGCCGTCA GATTTGAAAGAAGATAAACCTAGGAAAAGTTTGTTTAATGATGCAGGAAACAAGAAGAATT*CAA*TT AAAATGTGGTTTAGCCCTCGAAGTAAGAAAGTCAGATATGTTGTGAGTAAAGCTTCAGTGCAAACC CAGCCTGCAATAAAAAAAAGATGCAAGTGCTCAGCAAGACTCATATGAATTTGTTTCCCCAAGTCCT CCTGCAGATGTTTCTGAGAGGGCTAAAAAGGCTTCTGCAAGATCTGGAAAAAAGCAAAAAAAGAAAAA ACTTTAGCTGAAATCAACCAAAAATGGAATTTAGAGGCAGAAAAAGAAGATGGTGAATTTGACTCC AAAGAGGAATCTAAGCAAAAGCTGGTATCCTTCTGTAGCCAACCATCTGTTATCTCCAGTCCTCAG ATAAATGGTGAAATAGACTTACTAGCAAGTGGCTCCTTGACAGAATCTGAATGTTTTGGAAGTTTA ACTGAAGTCTCTTTACCATTGGCTGAGCAAATAGAGTCTCCAGACACTAAGAGCAGGAATGAAGTA GTGACTCCTGAGAAGGTCTGCAAAAATTATCTTACATCTAAGAAATCTTTGCCATTAGAAAATAAT GGAAAACGTGGCCATCACAATAGACTTTCCAGTCCCATTTCTAAGAGATGTAGAACCAGCATTCTG AGCACCAGTGGAGATTTTGTTAAGCAAACGGTGCCCTCAGAAAATATACCATTGCCTGAATGTTCT TCACCACCTTCATGCAAACGTAAAGTTGGTGGTACATCAGGGAGCAAAACAGTAACATGTCCGATG AATTCATTAGTCTTTCACCAGGTACACCACCTTCTACAT >CA150

CAACAATTCATTCCTGGGCCCCTGAAGATACTTGTTTGGCCCTGCTGTCTATTTAGCCAAGCACCC ACAACACAAGATCAGACCCCAAGTTCTGCTGTTTCAGTTGCCACGCCTACAGTTAGTGTTTCAACT CCTGCTCCTACAGCCACACCTGTGCAAACCGTTCCCCAGCCGCACCCTCAGACGTTACCTCCTGCT GTTCCTCATTCAGTACCTCAGCCAACAACAGCAATACCTGCTTTTCCACCAGTAATGGTACCTCCG TTTCGTGTTCCCCTTCCTGGCATGCCAATTCCACTTCCAGGTGTATTGCCAGGAATGGCCCCTCCT ATCGTACCCATGATACATCCCCAGGTTGCTATTGCAGCTTCACCTGCTACCTTAGCTGGAGCAACA GCAGTTTCTGAATGGACTGAATATAAAACAGCAGATGGGAAGACATATTATTATAATAATAGAACA GAGCCAATTAAAGAACCCTCTGAAGAGCCTCTGCCAATGGAGACGGAGGAGGAGCATCCTAAAGAA GAGCCTATAAAGGAGATAAAGGAGGAGCCCAAAGAAGAGGAGATGACTGAAGAAAAAGGCTGCC ${\tt CAGAAGGCAAAGCCAGTTGCTACTGCTATTCCTGGTACTCCATGGTGTGTCGTTTGGACTGGT}$ ATTGGCAGGGCAGATGTTGACAAAATTATTCAGGAGCCCCCTCATAAAAAAGGAATGGAGGAATTG AAGAAACTAAGGCACCCAACTCCGACAATGCTGTCGATCCAAAAGTGGCAATTCTCTATGAGTGCA ATTAAAGAGGAACAAGAATTAATGGAAGAAATTAATGAAGATGAGCCTGTTAAAGCAAAAAAACGG AAG

>CGI-125

>CGI-74

>CLH-17

>CLK1

>DRP-1

>EF1A

ATGCACATGAAGCTTTGAGTGAAGCTCTTCCTGGGGACAATGTGGGCTTCAATGTCAAGAATGTG
TCTGTCAAGGATGTTCGTCGTGGCAACGTTGCTGGTGACAGCAAAAATGACCCACCAATGGAAGCA
GCTGGCTTCACTGCTCAGGTGATTATCCTGAACCATCCAGGCCAAATAAGCGCCGGCTATGCCCCT
GTATTGGATTGCCACACGGCTCACATTGCATGCAAGTTTGCTGAAGCTGAAGGAAAAGATTGATCGC
CGTTCTGGTAAAAAGCTGGAAGATGGCCCTAAATTCTTGAAGTCTGGTGATGCTGCCATTGTTGAT
ATGGTTCCTGGCAAGCCCATGTGTTGTTGAGAGCTTCTCAGACTATCCACCTTTGGGTCGCTTTGCT
GTTCGTGATATGAGACAGACAGTTGCGGTGGGTGTCATCAAAGCAGTGGACAAGAAGGCTGCTGGA
GCTGGCAAGGTCACCAAGTCTGCCCCAGAAAGCTCAGAAGGCTAAA

GCGGCTGGGACCCTGTACACGTATCCTGAAAACTGGAGGGCCTTCAAGGCTCTCATCGCTGCTCAG ACCCCTGAATTTCTCCGCAAATTTCCTGCCGGCAAGGTCCCAGCATTTGAGGGTGATGATGGATTC TGTGTGTTTGAGAGCAACGCCATTGCCTACTATGTGAGCAATGAGGAGCTGCGGGGAAGTACTCCA ACCTGGGTGTTCCCCACCTTGGGCATCATGCACCACAACAACAGGCCACTGAGAATGCAAAGGAG GAAGTGAGGCGAATTCTGGGGGCTGCTGGATGCTTACTTGAAGACGAGGACTTTTCTGGTGGGCGAA CGAGTGACATTGGCTGACATCACAGTTGTCTGCACCCTGTTGTGGCTCTATAAGCAGGTTCTAGAG CCTTCTTTCCGCCAGGCCTTTCCCAATACCAACCGCTGGTTCCTCACCTGCATTAACCAGCCCCAG TTCCGGGCTGTCTTGGGCGAAGTGAAACTGTGTGAGAAGATGGCCCAGTTTGATGCTAAAAAGTTT GCAGAGACCCAACCTAAAAAGGACACACCACGGAAAGAGAAGGGTTCACGGGAAGAGAAGCAGAAG TGTGAGCAGGCGCTGGCTGAGCCCAAGGCCAAGGACCCCTTCGCTCACCTGCCCAAGAGTACC TTTGTGTTGGATGAATTTAAGCGCAAGTACTCCAATGAGGACACACTCTCTGTGGCACTGCCATAT TTCTGGGAGCACTTTGATAAGGACGGCTGGTCCCTGTGGTACTCAGAGTATCGCTTCCCTGAAGAA CTCACTCAGACCTTCATGAGCTGCAATCTCATCACTGGAATGTTCCAGCGACTGGACAAGCTGAGG AAGAATGCCTTCGCCAGTGTCATCCTTTTTGGAACCAACAATAGCAGCTCCATTTCTGGAGTCTGG GTCTTCCGAGGCCAGGAGCTTGCCTTTCCGCTGAGTCCAGATTGGCAGGTGGACTACGAGTCATAC ACATGGCGGAAACTGGATCCTGGCAGCGAGGAGACCCCAGACGCTGGTTCGAGAGTACTTTCCTGG GAGGGGCCTTCCAGCATGTGGGCAAAGCCTTCAATCAGGGCAAGATCTTCAAG

>EF1G(prey)

GCGGCTGGGACCCTGTACACGTATCCTGAAAACTGGAGGGCCTTCAAGGCTCTCATCGCTGCTCAG ACCCCTGAATTTCTCCGCAAATTTCCTGCCGGCAAGGTCCCAGCATTTGAGGGTGATGATGGATTC TGTGTGTTTGAGAGCAACGCCATTGCCTACTATGTGAGCAATGAGGAGCTGCGGGGAAGTACTCCA ACCTGGGTGTTCCCCACCTTGGGCATCATGCACCACAACAACAGGCCACTGAGAATGCAAAGGAG GAAGTGAGGCGAATTCTGGGGGCTGCTGGATGCTTACTTGAAGACGAGGACTTTTCTGGTGGGCGAA CGAGTGACATTGGCTGACATCACAGTTGTCTGCACCCTGTTGTGGCTCTATAAGCAGGTTCTAGAG CCTTCTTTCCGCCAGGCCTTTCCCAATACCAACCGCTGGTTCCTCACCTGCATTAACCAGCCCCAG TTCCGGGCTGTCTTGGGCGAAGTGAAAACTGTGTGAGAAGATGGCCCAGTTTGATGCTAAAAAGTTT GCAGAGACCCAACCTAAAAAGGACACACCACGGAAAGAGAAGGGTTCACGGGAAGAGAAGCAGAAG TGTGAGCAGGCGCTGGCTGAGCCCAAGGCCAAGGACCCCTTCGCTCACCTGCCCAAGAGTACC TTTGTGTTGGATGAATTTAAGCGCAAGTACTCCAATGAGGACACACTCTCTGTGGCACTGCCATAT TTCTGGGAGCACTTTGATAAGGACGGCTGGTCCCTGTGGTACTCAGAGTATCGCTTCCCTGAAGAA CTCACTCAGACCTTCATGAGCTGCAATCTCATCACTGGAATGTTCCAGCGACTGGACAAGCTGAGG AAGAATGCCTTCGCCAGTGTCATCCTTTTTGGAACCAACAATAGCAGCTCCATTTCTGGAGTCTGG GTCTTCCGAGGCCAGGAGCTTGCCTTTCCGCTGAGTCCAGATTGGCAGGTGGACTACGAGTCATAC ACATGGCGGAAACTGGATCCTGGCAGCGAGAGACCCAGACGCTGGTTCGAGAGTACTTTTCCTGG GAGGGGGCCTTCCAGCATGTGGGCAAAGCCTTCAATCAGGGCAAGATCTTCAAG >FEZ1

GGCAACTGCTCTGACACTGAGATCCATGAGAAAGAGAGGAAGAGTTCAATGAGAAGAGTGAAAAT
GATTCCGGTATCAACGAGGAGCCTCTGCTCACAGCAGATCAGGTAAATTGAGGAGATTGAGGAAAATG
ATGCAGAACTCCCCAGACCCTGAGGAAGAAGAGGAGGTTCTGGAAGAAGAGGAGATTGAGGAAAACT
TCCTCCCAGGCAGACTCGGTCCTCCTGCAGGAGATGCAGGCATTGACAACAACCACCTCCACGAGCTCCTCCTGCAGGAGATGCAGGCATTGACACAACAACCT
TGGTCCTATGAAGGGCTGAGGCACATGTCTGGGTCTGAGCTGACCGAGCTGCTGGACCAGGTGGAG
GGTGCCATCCGTGACTTCTCGGAGGAGCTGGTGCAGCAGCTGGCCCGCCGGGACCAGCTGGAGTTT
GAGAAGGAAGTGAAGAACTCCTTTATCACGGTGCTTATTGAGGTTCAGAACAAGCAGAAGGAGCAG
CGAGAACTGATGAAAAAAGAGGCGGAAACAGAAAAGGCCTGAGCCTGCAGAGCAGCCGGATAGAGAA
GGGAAACCAGATGCCTCTCAAGCGCTTCAGCATGGAAGGCATCTCCAACATTCTGCAGAGTGGCATC
CGCCAGACCTTTGGCTCCTCAGGAACTGACAAACAGTATCTGAACACAGTCATTCCTTACGAGAAG
AAAGCCTCTCCTCCCTCAGTGGAAGACCTGCAGATGCTGACAAACATTCTCTTTTGCCATGAAGGAG
GATAATGAGAAGGTGCCTACTTTGCTAACGGACTACATTTTAAAAGTGCTCTTGCCCTACC
>G451P1

ATGGCGTCGAGCGGCGGGGGGCTAGGGAGTTTATTTGATCACCACGTCCAGAGGGCCGTATGCGAC TCTCAGTACTTATTAATACAAGGAGTTCCTGCTGTGGGAGTCATGAAGGAATTAGTTGAGCGATTC GCTTTATATGGTGCAATTGAACAGTACAATGCTCTAGATGAATACCCAGCAGAAGACTTTACTGAA GTTTATCTTATTAAATTTATGAACTTACAAAGTGCAAGGACAGCCAAGAGAAAAATGGATGAACAG AGTTTCTTCGGTGGATTGCTTCATGTGTGCTATGCTCCAGAATTTGAAACAGTTGAAGAAACTAGA AAAAAACTACAAATGCGGAAGGCATATGTAGTAAAAACTACTGAAAATAAAGACCATTACGTGACA AAGAAGAAATTGGTTACAGAGCATAAAGACACAGAGGATTTTAGACAAGACTTCCACTCAGAGATG TCTGGATTTTGTAAAGCTGCTTTGAACACTTCTGCAGGGAACTCAAATCCTTATCTTCCGTATTCC GCACCAGACTCCTCTAAGGATGGTAGAAACCATCATAAAACAATGGGGCATTATAACCACAATGAC TCTTTGCGGAAAACACAGATAAACTCTTTGAAAAACTCAGTGGCCTGCCCTGGTGCACAAAAGGCT ATTACGTCTTCAGAGGCAGTTGACAGATTTATGCCTAGGACAACACAACTGCAGGAGCGCAAAAGA ATTGGACCTCTGTTACCAGACATCTCTAAAGTGGATATGCACGATGACTCATTGAATACAACGGCG AATTTAATTCGGCATAAACTTAAAGAGGTAATTTCATCTGTGCCAAAGCCTCCAGAGGACAAGCCA GAAGATGTACATACAAGTCATCCATTAAAACAAAGAAGAAGAATA

>G45IP2

>GADD45G

AGGACCTGTATGCCCTATATATTTTCTCTGTCCTTGGAGGCTCTGAAATGTTTCCGCATCAGGAAC AATGAGAAGATGCTGAGTGACAGCCACGGCGTGGAGACCATCCGGGACATCCTGCCAGACACCAGC CTTGGGGGCCCATCCTTCTTCAAAATCATCACGGCCAAGGCTGTCCTGAAGCTGCAGGCCGGAAAC GCCGAGGAAGCCGCCTGTGGAGGGATCTGGTCCGCAAAGTCCTGGCATCCTACTTGGAGACAGCC GAGGAGGCGGTGACCCTGGGCGGGAGCCTGGATGAAAACTGTCAGGAGGTGGTGAAATTTGGCAGG CGGGAGAATGGCTTCCTGCTGCAGTACCTGGTGGCTATCCCCATGGAGAAAGGCCTTGACTCCCAA GGCTGCTTCTGCGCAGGCTGCTCCCGGCAGATCGGCTTCTCCTTTGTACGACCCAAGCTCTGTGCC TTCTCTGGCCTCTATTACTGTGACATCTGCCACCAAGACGATGCCTCAGTGATTCCGGCCAGGATC CGGGCCCAGCCCTCATCAACCTGCAGATGGTGAACGCGTCTCTGTACGAGCATGTGGAGCGGGATG CACCTCATTGGGAGGAGCAGCAGCTGAAGCTCCTGGGGGATTACCTGGGCCTGTGCCGGAGT GGCGCCCTGAAGGAGCTCAGCAAGAGGCTCAACCACAGGAATTATCTCTTGGAATCTCCGCATAGG TTCAGTGTTGCTGACCTCCAACAGATCGCAGACGGGTGTATGAAGGATTCCTCAAGGCCCTGATT GAATTTGCCTCCCAGCATGTCTACCACTGCGACCTGTGCACCCAGCGCGGCTTCATCTGCCAGATC TGCCAGCACCACGACATCATCTTCCCCTTTGAGTTTGACACCACAGTCAGGTGTGCCGAGTGCAAG ACCGTCTTCCACCAGAGCTGCCAGGCTGTGGTGAAGAAGGGCTGCCCCGCTGTGCCCGCCGGCGC AAGTACCAGGAACAGAACATTTTCGCC >G45IP3

CCTAACAGGGGCCCTCTAATGACCTCCGGCCTAGCCATGTGATTTCACTTCCACTC CATAACGCTCCTCATACTAGGCCTACTAACCAACACACTAACCATATACCAATGATGGCGCGATGT AACACGAGAAAGCACATACCAAGGCCACCACACACCACCTGTCCAAAAAGGCCTTCGATACGGGAT AATCCTATTTATTACCTCAGAAGTTTTTTTTTTCTCGCAGGATTTTTCTGAGCCTTTTACCACTCCAG CCTAGCCCCTACCCCCAATTAGGAGGGCACTGGCCCCCAACAGGCATCACCCCGCTAAATCCCCT

GGTGCAGGCGCTGAGCCGGGATTGGAGTGTGGTTGGAGTTGGGGAGCCAAGGGTGTGTGCCGGTGG CCGGGCTGGGGTCTCCGCCGCCCCCCCGCCGCCCGCTCACTGCGCTGGCTCCTCCGCAGG ATGCAGGGTGCCGGGAAAGCGCTGCATGAGTTGCTGCTGTCGGCGCAGCGTCAGGGCTGCCTCACT GCCGGCGTCTACGAGTCAGCCAAAGTCTTGAACGTGGACCCGACAATGTGACCTTCTGTGTGCTG GCTGCGGGTGAGGAGGACGAGGCGACATCGCGCTGCAGATCCATTTTACGCTGATCCAGGCTTTC TGCTGCGAGAACGACATCGACATAGTGCGCGTGGGCGATGTGCAGCGGCTGGCGGCTATCGTGGGC GCCTGGAAGGATCCCGCCTTGGAGAAGCTCAGCCTGTTTTGCGAGGAGAGCCGCAGCGTTAACGAC TGGGTGCCCAGCATCACCCTCCCCGAG

>GIT1

CCACAGATGGCTGACAGATCTCGGCAAAAGTGCATGTCTCAGAGCCTTGACTTATCCGAATTGGCC AAAGCTGCTAAGAAGAAGCTGCAGGCGCTCAGCAACCGGCTTTTTGAGGAACTCGCCATGGACGTG TATGACGAGGTGGATCGAAGAGAAATGATGCAGTGTGGCTGCCTACCCAAAACCACAGCACTCTG GTGACAGAGCGCAGTGCCGTTCCTGCCTGTTAACCCGGAATACTCAGCCACGCGGAATCAG GGGCGACAAAAGCTGGCCGCTTTAATGCCCGAGAGTTTGCCACCTTGATCATCGACATTCTCAGT GAGGCCAAGCGGAGACAGCAGGCAAGAGCCTGAGCAGCCCCACAGACAACCTCGAGCTGTCTCTG CGGAGCCAGAGTGACCTCGACGACCAACACGACTACGACAGCGTGGCCTCTGACGAGGACACAGAC CAGGAGCCCCTGCGCAGCACCGGCGCCACTCGGAGCAACCGGGCCCGGAGCATGGACTCCTCGGAC TTGTCTGACGGGGCTGTGACGCTGCAGGAGTACCTGGAGCTGAAGAACGCCCTGGCTACATCGGAG GCAAAGGTGCAGCAGCTCATGAAGGTCAACAGTAGCCTGAGCGACGAGCTCCGGAGGCTGCAGCGA GAGATCCACAGGCTGCAGGCGGGGGAGAACCTGCAGCTCCGGCAGGCCCGGTGCCCACACCT CCACTCCCCAGTGAACGGGCGGAACACACCCCATGGCGCCAGGGGAGCACACCGCAGGGAT CGCCAGGCCTTTTCCATGTATGAACCTGGCTCTGCCCTGAAGCCCTTTGGGGGCCCCCCTGGGGAC GAGCTCACTACGCGGCTGCAGCCTTTCCACAGCACTGAGCTAGAGGACGACGCCATCTATTCAGTG CACGTCCCTGCTGGCCTTTACCGGATCCGGAAAGGGGTGTCTGCCTCAGCTGTGCCCTTCACTCCC TCCTCCCCGCTGCTGCTGCTCCCAGGAGGGAAGCCGCCACACGAGCAAGCTTTCCCGCCACGGC AGTGGAGCCGACAGTGACTATGAGAACACGCAAAGTGGGGACCCACTGCTGGGGGCTGGAAGGGAAG GATCCTGGGCTTCCCAGCACAGAGGATGTCATCTTGAAGACAGAGCAGGTCACCAAGAACATTCAG GAACTGTTGCGGGCAGCCCAGGAGTTCAAGCATGACAGCTTCGTGCCCTGCTCAGAGAAGATCCAT TTGGCTGTGACCGAGATGGCCTCCCTCTTCCCAAAGAGGCCAGCCCTGGAGCCAGTGCGGAGCTCA CCCGGCGCCCCAGTGGACTTCCAGCTGCTGACTCAGCAGGTGATCCAGTGCGCCTATGACATCGCC AAGGCTGCCAAGCAGCTGGTCACCATCACCACCCGAGAGAAGAAGCAG >hADA3

>HBO1

GACGCTGAGAGGCAGGAGGCACTAGGGATCGTCCGCAGGATTGGGACTGATACAGAGGCCGCCACG GAGCCCGCCGGAGCCACCGTTCCTGCTGCTGCCGCCGCTGCCCGAATCGGAACCGTCGGGCCGCAG CCGCCGGCAATGCCGCGAAGGAAGAGGAATGCAGGCAGTAGTTCAGATGGAACCGAAGATTCCGAT TTTTCTACAGATCTCGAGCACACAGACAGTTCAGAAAGTGATGGCACATCCCGACGATCTGCTCGA GTCACCCGCTCCTCAGCCAGGCTAAGCCAGAGTTCTCAAGATTCCAGTCCTGTTEGAAATCTGCAG TCTTTTGGCACTGAGGAGCCTGCTTACTCTACCAGAAGAGTGACCCGTAGTCAGCAGCAGCCTACC CCAGTGACACCGAAAAAATACCCTCTTCGGCAGACTCGTTCATCTGGTTCAGAAACTGAGCAAGTG GTTGATTTTTCAGATAGAGAAACTAAAAATACAGCTGATCATGATGAGTCACCGCCTCGAACTCCA ACTGGAAATGCGCCTTCTTCTGAGTCTGACATAGACATCTCCAGCCCCAATGTATCTCACGATGAG CGCTTCCATGAAAGCTACAACTTCAATATGAAGTGTCCTACACCAGGCTGTAACTCTCTAGGACAC CTTACAGGAAAACATGAGAGACATTTCTCCATCTCAGGATGCCCACTGTATCATAACCTCTCAGCT GACGAATGCAAGGTGAGAGCACAGAGCCGGGATAAGCAGATAGAAGGAAAGGATGCTGTCTCACAGG CAAGATGACAACAACAGGCATGCAACCAGGCACCAGGCACCAACGGAGAGGCAGCTTCGATATAAG GAAAAAGTGGCTGAACTCAGGAAGAAAAGAAATTCTGGACTGAGCAAAGAACAGAAAGAGAAATAT ATGGAACACAGACAGACCTATGGGAACACACGGGAACCTCTTTTAGAAAACCTGACAAGCGAGTAT GACTTGGATCTTTTCCGAAGAGCACAAGCCCGGGCTTCAGAGGATTTGGAGAAGTTAAGGCTGCAA GGCCAAATCACAGAGGGAAGCAACATGATTAAAACAATTGCTTTTTGGCCGCTATGAGCTTGATACC TGGTATCATTCTCCATATCCTGAAGAATATGCACGGCTGGGACGTCTCTATATGTGTGAATTCTGT CCTGGTGATGAGATATATCGCAAAGGTTCAATCTCTGTGTTTGAAGTGGATGGCAAGAAAAACAAG ATCTACTGCCAAAACCTGTGCCTGTTGGCCAAACTTTTTCTGGACCACAAGACATTATATTATGAT GTGGAGCCCTTCCTGTTCTATGTTATGACAGAGGCGGACAACACTGGCTGTCACCTGATTGGATAT TTTTCTAAGGAAAAGAATTCATTCCTCAACTACAACGTCTCCTGTATCCTTACTATGCCTCAGTAC ATGAGACAGGGCTATGGCAAGATGCTTATTGATTTCAGTTATTTGCTTTCCAAAGTCGAAGAAAAA GTTGGCTCCCCAGAACGTCCACTCTCAGATCTGGGGCTTATAAGCTATCGCAGTTACTGGAAAGAA ACGGCTGTGAATCCTGTGGACATTGTCAGCACTCTGCAAGCCCTTCAGATGCTCAAATACTGGAAG GGAAAACACCTAGTTTTAAAGAGACAGGACCTGATTGATGAGTGGATAGCCAAAGAGGCCAAAAGG TCCAACTCCAATAAACCATGGATCCCAGCTGCTTAAAATGGACCCCTCCCAAGGGCACT

>HD1.7

ATGGCGACCCTGGAAAAGCTGATGAAGGCCTTCGAGTCCCTCAAGTCCTTCCAGCAGCAGCAGCAG CCGCCGCCGCCGCCTCCTCAGCTTCCTCAGCCGCCGCCGCAGGCACAGCCGCTGCTGCCTCAG CGACCAAAGAAAGAACTTTCAGCTACCAAGAAAGACCGTGTGAATCATTGTCTGACAATATGTGAA AACATAGTGGGACAGTCTGTCAGAAATTCTCCAGAATTTCAGAAACTTCTGGGCATCGCTATGGAA CTTTTTCTGCTGTGCAGTGATGACGCAGAGTCAGATGTCAGGATGGTGGCTGACGAATGCCTCAAC AAAGTTATCAAAGCTTTGATGGATTCTAATCTTCCAAGGTTACAGCTCGAGCTCTATAAGGAAATT AAAAAGAATGGTGCCCCTCGGAGTTTGCGTGCTGCCCTGTGGAGGTTTGCTGAGCTGGCTCACCTG AGACCCGAAGAATCAGTCCAGGAGACCTTGGCTGCAGCTGTTCCCAAAATTATGGCTTCTTTTGGC AATTTTGCAAATGACAATGAAATTAAGGTTTTGTTAAAGGCCTTCATAGCGAACCTGAAGTCAAGC TCCCCCACCATTCGGCGGACAGCGGCTGGATCAGCAGTGAGCATCTGCCAGCACTCAAGAAGGACA CAATATTTCTATAGTTGGCTACTAAATGTGCTCTTAGGCTTACTCGTTCCTGTCGAGGATGAACAC TCCACTCTGCTGATTCTTGGCGTGCTGCTCACCCTGAGGTATTTGGTGCCCTTGCTGCAGCAGCAG GTCAAGGACACAAGCCTGAAAGGCAGCTTCGGAGTGACAAGGAAAGGAAATGGAAGTCTCTCCTTCT GCAGAGCAGCTTGTCCAGGTTTATGAACTGACGTTACATCATACACAGCACCAAGACCACAATGTT GTGACCGGAGCCCTGGAGCTGTTGCAGCAGCTCTTCAGAACGCCTCCACCCGAGCTTCTGCAAACC CTGACCGCAGTCGGGGGCATTGGGCAGCTCACCGCTGCTAAGGAGGAGTCTGGTGGCCGAAGCCGT AGTGGGAGTATTGTGGAACTTATAGCTGGAGGGGGTTCCTCATGCAGCCCTGTCCTTTCAAGAAAA CAAAAAGGCAAAGTGCTCTTAGGAGAAGAAGAAGCCTTGGAGGATGACTCTGAATCGAGATCGGAT GGGGTTTCCACTCCAGGGTCAGCAGGTCATGACATCATCACAGAACAGCCACGGTCACAGCACACT GCAGGCGGACTCAGTGGATCTGGCCAGCTG

>HDd1.0

>HDdl.3

CCAAGGTTACAGCTCGAGCTCTATAAGGAAATTAAAAAGAATGGTGCCCCTCGGAGTTTGCGTGCT GCCCTGTGGAGGTTTGCTGAGCTGGCTCACCTGGTTCGGCCTCAGAAATGCAGGCCTTACCTGGTG AACCTTCTGCCGTGCCTGACTCGAACAAGCAAGAGACCCGAAGAATCAGTCCAGGAGACCTTGGCT GCAGCTGTTCCCAAAATTATGGCTTCTTTTGGCAATTTTGCAAATGACAATGAAATTAAGGTTTTG TTAAAGGCCTTCATAGCGAACCTGAAGTCAAGCTCCCCCACCATTCGGCGGACAGCGGCTGGATCA GCAGTGAGCATCTGCCAGCACTCAAGAAGGACACAATATTTCTATAGTTGGCTACTAAATGTGCTC TTAGGCTTACTCGTTCCTGTCGAGGATGAACACTCCACTCTGCTGATTCTTGGCGTGCTGCTCACC CTGAGGTATTTGGTGCCCTTGCTGCAGCAGCAGGTCAAGGACACAAGCCTGAAAGGCAGCTTCGGA GTGACAAGGAAAGAATGGAAGTCTCTCCTTCTGCAGAGCAGCTTGTCCAGGTTTATGAACTGACG GCTGCTAAGGAGGAGTCTGGTGGCCGAAGCCGTAGTGGGAGTATTGTGGAACTTATAGCTGGAGGG GGTTCCTCATGCAGCCCTGTCCTTTCAAGAAAACAAAAAGGCAAAGTGCTCTTAGGAGAAGAAGAA GCCTTGCAGGATGACTCTGAATCGAGATCGGATGTCAGCAGCTCTGCCTTAACAGCCTCAGTGAAG GATGAGATCAGTGGAGAGCTGGCTGCTTCTTCAGGGGTTTCCACTCCAGGGTCAGCAGGTCATGAC ATCATCACAGAACAGCCACGGTCACAGCACACTGCAGGCGGACTCAGTGGATCTGGCCAGCTG >HDexQ20

>HDexQ51

GCTGACACCCTGCAAGGCCACCGGGACCGCTTCATGGAGCAGTTTACAAAGTTGAAAGATCTGTTC TACCGCTCCAGCAACCTGCAGTACTTCAAGCGGCTCATTCAGATCCCCCAGCTGCCTGAGAACCCA CCCAACTTCCTGCGAGCCTCAGCCCTGTCAGAACATATCAGCCCTGTGGTGGTGATCCCTGCAGAG GCCTCATCCCCCGACAGCGAGCCAGTCCTAGAGAAGGATGACCTCATGGACATGGATGCCTCTCAG TTCAACAGTCAAAATGGTGTGAACAAGGATGAGAAGGACCACTTAATTGAGCGACTATACAGAGAG ATCAGTGGATTGAAGGCACAGCTAGAAAACATGAAGACTGAGAGCCAGCGGGTTGTGCTGCAGCTG AAGGGCCACGTCAGCGAGCTGGAAGCAGATCTGGCCGAGCAGCAGCACCTGCGGCAGCAGCGCCC GACGACTGTGAATTCCTGCGGGCAGAACTGGACGAGCTCAGGAGGCAGCGGGAGGACACCGAGAAG GCTCAGCGGAGCCTGTCTGAGATAGAAAGGAAAGCTCAAGCCAATGAACAGCGATATAGCAAGCTA AAGGAGAAGTACAGCGAGCTGGTTCAGAACCACGCTGACCTGCTGCGGAAGAATGCAGAGGTGACC AAACAGGTGTCCATGGCCAGACAAGCCCAGGTAGATTTGGAACGAGAAAAAAAGAGCTGGAGGAT TCGTTGGAGCGCATCAGTGACCAGGGCCAGCGGAAGACTCAAGAACAGCTGGAAGTTCTAGAGAGC TTGAAGCAGGAACTTGCCACAAGCCAACGGGAGCTTCAGGTTCTGCAAGGCAGCCTGGAAACTTCT GCCCAGTCAGAAGCAAACTGGGCAGCCGAGTTCGCCGAGCTAGAGAAGGAGCGGGACAGCCTGGTG AGTGGCGCAGCTCATAGGGAGGAGGAATTATCTGCTCTTCGGAAAGAACTGCAGGACACTCAGCTC AAACTGGCCAGCACAGAGGAATCTATGTGCCAGCTTGCCAAAGACCAACGAAAAATGCTTCTGGTG GGGTCCAGGAAGGCTGCGGGGCAGCAGGTGATACAAGACGCGTCGACGCGGCCG

>HIP11

>HIP15

ATTCACATGGCTCCACCTTATCCAAATCTAAACATGATTGAGACATTCATATGTCAAGTGTGTGAG
GAAACCCTTGCACATAGTGTGGATTCCCTTGAGCAGCTGACTGGAATAAGGATGCTTAGACACCTC
ACTATGACTATTGACTATCACACACTGATTGCCAACTATATGTCCGGGTTTCTCTCTTATTAACC
ACAGCCAATGCGAGAACGAAGTTTCACGTTCTGAAAATGCTATTGAATTTTGTCTGAAAATCCTGCT
GTGGCAAAAAAACTATTCAGTGCCAAAGCTCTTTCAATATTTTGTGGGTCTCTTTAACATAGAAGAG
ACAAATGATAATATTCAAATTGTTATTAAAATGTTTCAGAATATCAGTAACATTATAAAAAGTGGA
AAGATGTCCTTAATTGATGATGATTTCAGTCTTGAGCCGCTTATTTCTGCATTTCGTGAATTTCAG
GAGTTAGCTAAGCAACTACAAGCCCAAATAGACAACCAAAATGATCCTGAGGTGGGACAACAAAGT
>HIP16

>HIP5 (bait)

AATCAGAGCTTTAAGTTTGGAAATCAAAAAGCAGCAGCTATCAGAGATAGTATTGAATTAA CAAAG GAAAAAGGTGCAGAAATTCCAAAGACTATTAAAAAACTGAGGTGGTTTGATGAAACTAGCAATATA GAAAACAATGCTGAAAACAGTCATTCACTGAAGAATAAAACAGGAACAACTCAACAGCATTCTCAA CAATTCCACATTCAAAGTGGTGCTGGAAGCAACATAATTAGTGTTTCTACTTGTGCTGTAAATTCT GCTGATACAAAGAAGTCCAGGGAGGATTCTATCTCTGAAAATGTTACGACTTTAGGAGGATCTGGA GCAGACCATATGCCTTTGAACTGTTTTATACCTTCAGGTTATAACTTTGCTAAACATGCCTGGCCA GCCTCAAAAAAGAAGAAAGTAAAATCCCTGTACATGATGATTCTAAAACTAAGCAAGGTAAGCCA CAAAGAGGTAGAGCAAAAATAATTAGAAAACCAGGATCTGCAAAAGTCCAATCAGGCTTTATATGT CAGGGAAAATTAATTATACCTTGTCCTCCTCCTCAATCTACATCAAATATTAGAAGTGGTAAAAAT ATACAAGTGTCTCAGTGTCAACCAGTAACTCCTGAAAATCCTCAAAACATTATTACACATAACTCT TTTAATTCAAAACATGTGCTTCCAACAGAACACAGTTTGAATCAGTGGAATCAGGAAAGTAGTTCT CCACTCTCAAATGCTTGTTCTGACCTAGTCACTGTGATACCATCACTGCCATCATATTGTTCTTCA GAGTGCCAAACTTTCGCAAAAATAAATCATTCAAATGGCACTCAAGCAGTTGCCCGGCAAGATGCG ACATTATATTGCACCCAAAGAAGTCCTGTTTGTGAAGAAAGTTATCCGTCTGTGACTCTAAGAACT GCTGAAGAAGAATCAGTTCCCTTATGGAAAAGAGGTCCTAATGTCCTGCATCAAAATAAGAGGGCT ACAGGGTCTACTGTTATGAGAAGAAAACGAATTGCTGAAACTAAGCGGAGAAATATTTTAGAGCAG AAAAGACAAAACCCTGGATCTGTAGGACAGAAGTACAGTGAGCAAATTAATAATTTTGGACAAAGT GTCCTGCTAAGTTCAAGTGAGCCAAAACAAACTACAAGGGGTACTTCTTATATTGAAGAAGTTTCA GATAGTACTTCTGAGTTTTTGATGGCTGAAAACTTAGTGAAAGCATCAGTGCCGGAGGATGAGATT AACATCTGCACACTGTCAGCTGAAGAACAGAAGATCCTAGAGTCCCTTAATGATCTCAATGAAAGA CTTCTGGAGAAGAGAAGATAGAACCAGCAGCTGCAGAGACAAGAGA

>HIP5 (prey) AATCAGAGCTTTAAGTTTGGAAATCAAAAAGCAGCAGCTATCAGAGATAGTATTGAATTAACAAAG GAAAAAGGTGCAGAAATTCCAAAGACTATTAAAAAACTGAGGTGGTTTGATGAAACTAGCAATATA GAAAACAATGCTGAAAACAGTCATTCACTGAAGAATAAAACAGGAACAACTCAACAGCATTCTCAA CAATTCCACATTCAAAGTGGTGCTGGAAGCAACATAATTAGTGTTTCTACTTGTGCTGTAAATTCT GCTGATACAAAGAAGTCCAGGGAGGATTCTATCTCTGAAAATGTTACGACTTTAGGAGGATCTGGA GCAGACCATATGCCTTTGAACTGTTTTATACCTTCAGGTTATAACTTTGCTAAACATGCCTGGCCA GCCTCAAAAAAAGAAGAAAGTAAAATCCCTGTACATGATGATTCTAAAACTAAGCAAGGTAAGCCA CAAAGAGGTAGAGCAAAAATAATTAGAAAACCAGGATCTGCAAAAGTCCAATCAGGCTTTATATGT CAGGGAAAATTAATTATACCTTGTCCTCCTCCTCAATCTACATCAAATATTAGAAGTGGTAAAAAT ATACAAGTGTCTCAGTGTCAACCAGTAACTCCTGAAAATCCTCAAAACATTATTACACATAACTCT TTTÄATTCAAAACATGTGCTTCCAACAGAACACAGTTTGAATCAGTGGAATCAGGAAAGTAGTTCT CCACTCTCAAATGCTTGTTCTGACCTAGTCACTGTGATACCATCACTGCCATCATATTGTTCTTCA GAGTGCCAAACTTTCGCAAAAATAAATCATTCAAATGGCACTCAAGCAGTTGCCCGGCAAGATGCG ACATTATATTGCACCCAAAGAAGTCCTGTTTGTGAAGAAAGTTATCCGTCTGTGACTCTAAGAACT GCTGÄÄGAAGAATCÄGTTCCCTTÄTGGÄAAAGAGGTCCTAATGTCCTGCATCAAAATAÄGAGGGCT ACAGGGTCTACTGTTATGAGAAAAACGAATTGCTGAAACTAAGCGGAGAAATATTTTAGAGCAG AAAAGACAAAACCCTGGATCTGTAGGACAGAAGTACAGTGAGCAAATTAATAATTTTGGACAAAGT GTCCTGCTAAGTTCÄAGTGAGCCAAAACAAACTACAAGGGGTACTTCTTATATTGAAGAAGTTTCA GATAGTACTTCTGAGTTTTTGATGGCTGAAAACTTAGTGAAAGCATCAGTGCCGGAGGATGAGATT AÁCATCTGCACACTGTCÄGCTGAAGAACAGAAGATCCTAGAGTCCCTTAATGATCTCAATGAAAGA CTTCTGGÄGAAGAGAAGATAGAACCAGCAGCTGCAGAGACAAGAGA

>HMP

CAAGAACAAGTTAAAATTGAGTCTCTAGCCAAGAGCTTAGAAGATGCTCTGAGGCAAACTGCAAGT GTCACTCTGCAGGCTATTGCAGCTCAGAATGCTGCGGTCCAGGCTGTCAATGCACACTCCAACATA TTGAAAGCCGCCATGGACAATTCTGAGATTGCAGGCGAGAAGAAATCTGCTCAGTGGCGCACAGTG GAGGGTGCATTGAAGGAAACGCAGTAGATGAAGCTGCCGATGCCCTTCTCAAACGCCAAA GAAGAGTTAGAGAAGATGAAAAGTGTGATTGAAAATGCAAAGAAAAAAAGAGGTTGCTGGGGCCAAG CCTCATATAACTGCTGCAGAGGGTAAACTTCACAACATGATAGTTGATCTGGATAATGTGGTCAAA AAGGTCCAAGCAGCTCAGTCTGAGGCTAAGGTTGTATCTCAGTATCATGAGCTGGTGGTCCAAGCT AGTGTTTCAGACTTAGCTGACAAGCTCTCTACTGATGATCTGAACTCCCTCATTGCTCATGCACAT TTAGCCTTGGAGAAACCAAAAGCTGGAAGAAAGCGGGCATTTGACTCTGCAGTAGCAAAAGCATTA GAACATCACAGAAGTGAAATACAGGCTGAACAGGACAGAAAGATAGAAGAAGTCAGAGATGCCATG GAAAATGAAATGAGAACCCAGCTTCGCCGACAGGCAGCTGCCCACACTGATCACTTGCGAGATGTC CTTAGGGTACAAGAACAGGAATTGAAGTCTGAATTTGAGCAGAACCTGTCTGAGAAACTCTCTGAA CAAGAATTACAATTTCGTCGTCTCAGTCAAGAGCAAGTTGACAACTTTACTCTGGATATAAATACT GCCTATGCCAGACTCAGAGGAATCGAACAGGCTGTTCAGAGCCATGCAGTTGCTGAAGAGGAAGCC AGAAAAGCCCACCAACTCTGGCTTTCAGTGGAGGCATTAAAGTACAGCATGAAGACCTCATCTGCA GAAACACCTACTATCCCGCTGGGTAGTGCGGTTGAGGCCCATCAAAGCCAACTGTTCTGATAATGAA TTCACCCAAGCTTTAACCGCAGCTATCCCTCCAGAGTCCCTGACCCGTGGGGTGTACAGTGAAGAG ACCCTTAGAGCCCGTTTCTATGCTGTTCAAAAACTGGCCCGAAGGGTAGCAATGATGATGAAACC AGAAATAGCTTGTACCAGTACTTCCTCCTACCTACAGTCCCTGCTCCTATTCCCACCTCAGCAA CTGAAGCCGCCCCAGAGCTCTGCCCTGAGGATATAAACACATTTAAATTACTGTCATATGCTTCC TATTGCATTGAGCATGGTGATCTGGAGCTAGCAGCAAAGTTTGTCAATCAGCTGAAGGGGGAATCC AGACGAGTGGCACAGGACTGGCTGAAGGAAGCCCGAATGACCCTAGAAACGAAACAGATAGTGGAA ATCCTGACAGCATATGCCAGCGCCGTAGGAATAGGAACCACTCAGGTGCAGCCAGAG >HP28

>HSPC232

>HYPA

GGCCGCCGGCGAGCAGTCTGAGCCCGACGATGAGGCCGGGGACGGGAGCTGAGCGTGGAGGCCTC ATGATGGGGCACCCTGGCATGCATTATGCCCCCAATGGGAATGCACCCTATGGGTCAGAGAGCGAAT ATGCCTCCTGTACCTCATGGAATGATGCCGCAGATGATGCCCCCTATGGGAGGGCCACCAATGGGA CAAATGCCTGGAATGATGTCGTCAGTAATGCCTGGAATGATGTCTCATATGTCTCAGGCTTCC ATGCAGCCTGCCTTACCGCCAGGAGTAAATAGTATGGATGTAGCAGCAGGTACAGCATCTGGTGCA AAATCAATGTGGACTGAACATAAATCACCTGATGGAAGGACTTACTACTACAACACTGAAACCAAA CAGTCTACCTGGGAGAAACCAGATGATCTTAAAACACCTGCTGAGCAACTCTTATCTAAATGCCCC TGGGCCAAACCTAAAGAACTTGAGGATCTTGAAGGATACCAGAATACCATTGTTGCTGGAAGTCTT ATTACAAAATCAAACCTGCATGCAATGATCAAAGCTGAAGAAAGĆAGTAAGCAAGAAGAGTGCACC ACAACATCAACAGCTCCAGTCCCTACAACAGAAATTCCGACCACAATGAGCACCATGGCTGCTGCC GAAGCAGCAGCTGCTGTTGTTGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAATGCT AATGCTTCCACTTCTGATATACTGTCAGTGGAACTGTTCCAGTTGTTCCTGAGCCTGAAGTT ACTTCCATTGTTGCTACTGTTGTAGATAATGAGAATACAGTAACTATTTCAACTGAGGAACAAGCA CAACTTACTAGTACCCCTGCTATTCAGGATCAAAGTGTGGAAGTATCCAGTAATACTGGAGAAGAA AAGCGGGTACCATCGAATGCTTCATGGGAGCAGGCTATGAAAATGATTATTAATGATCCACGATAC AGTGCTTTGGCAAAGTTAAGTGAAAAAAGCAAGCCTTTAATGCCTATAAAGTCCAGGCAAAAAAA AAAGAAAAAAAAAAAAAAAAAAAA

>HZFH

>IKAP

>IMPD2

CTCAAAGAAGCAGTCCGCTGGAGGACCTGGCCCTCCTGGAGGCACTGAGTGAAGTGGTGCAGAAC
ACTGAAAACCTGAAAGATGAAGTATACCATATTTTAAAGGTACTCTTTCTCTTTGAGTTTCAATGAA
CAAGGAAGGGAATTACAGAAGGCCTTTGAAGATACGCTGCAGTTGATGGAAAGGTCACTTCCAGAA
ATTTGGACTCTTACCTACCAGCAGAATTCAGCTACCCCGGTTCTAGGTCCCAATTCTACTGCAAAT
AGTATCATGGCATCTTATCAGCAACAGAAGACTTCGGTTCCTGTTCTTGATGCTGAGCTTTTTATA
CCACCAAAGATCAACAGAAGAACCCAGTGGAAGCTGAGCCTGCTAGAC

GACTITCTCATTCTCCCTGGGTACATCGACTTCACTGCAGACCAGGTGGACCTGACTTCTGCTCTG ACCAAGAAAATCACTCTTAAGACCCCACTGGTTTCCTCTCCCATGGACACAGTCACAGAGGCTGGG ATGGCCATAGCAATGGCGCTTACAGGCGGTATTGGCTTCATCCACCACAACTGTACACCTGAATTC CAGGCCAATGAAGTTCGGAAAGTGAAGAAATATGAACAGGGATTCATCACAGACCCTGTGGTCCTC AGCCCCAAGGATCGCGTGCGGGATGTTTTTGAGGCCCAAGGCCCGGCATGGTTTCTGCGGTATCCCA ATCACAGACACAGGCCGGATGGGGAGCCGCTTGGTGGGCCATCATCTCCTCCAGGGACATTGATTTT CTCAAAGAGGAGGAACATGACTGTTTCTTGGAAGAGATAATGACAAAGAGGGAAGACTTGGTGGTA GCCCCTGCAGGCATCACACTGAAGGAGGCAAATGAAATTCTGCAGCGCAGCAAGAAGGGAAAAGTTG CCCATTGTAAATGAAGATGATGAGCTTGTGGCCCATCATTGCCCGGACAGACCTGAAGAAGAATCGG GAGGATGACAAGTATAGGCTGGACTTGCTCGCCCAGGCTGGTGTGGATGTAGTGGTTTTTGGACTCT TCCCAGGGAAATTCCATCTTCCAGATCAATATGATCAAGTACATCAAAGACAAATACCCTAATCTC CAAGTCATTGGAGGCAATGTGGTCACTGCTGCCCAGGCCAAGAACCTCATTGATGCAGGTGTGGAT GCCCTGCGGGTGGGCATGGGAAGTGGCTCCATCTGCATTACGCAGGAAGTGCTGGCCTGTGGGCCG CCCCAAGCAACAGCAGTGTACAAGGTGTCAGAGTATGCACGGCGCTTTGGTGTTCCGGTCATTGCT GATGGAGGAATCCAAAATGTGGGTCATATTGCGAAAGCCTTGGCCCTTGGGGCCTCCACAGTCATG ATGGGCTCTCTCCTGGCTGCCACCACTGAGGCCCCTGGTGAATACTTCTTTTCCGATGGGATCCGG CTAAAGAAATATCGCGGTATGGGTTCTCTCGATGCCATGGACAAGCACCTCAGCAGCAGCAGAACAGA TATTTCAGTGAAGCTGACAAAATCAAAGTGGCCCAGGGAGTGTCTGGTGCTGCAGGACAAAGGG TCAATCCACAAATTTGTCCCTTACCTGATTGCTGGCATCCAACACTCATGCCAGGACATTGGTGCC AAGAGCTTGACCCAAGTCCGAGCCATGATGTACTCTGGGGAGCTTAAGTTTGAGAAGAGAACGTCC TCAGCCCAGGTGGAAGGTGGCGTCCATAGCCTCCATTCGTATGAGAAGCGGCTTTTC >KPNA2

GCTTGGGCACTCACTAACATTGCTTCTGGGACATCAGAACAAACCAAGGCTGTGGTAGATGGAGGT GCCATCCCAGCATTCATTTCTCTGTTGGCATCTCCCCATGCTCACATCAGTGAACAAGCTGTCTGG GCTCTAGGAAACATTGCAGGTGATGGCTCAGTGTTCCGAGACTTGGTTATTAAGTACGGTGCAGTT GACCCACTGTTGGCTCTCCTTGCAGTTCCTGATATGTCATCTTTAGCATGTGGCTACTTACGTAAT CTTACCTGGACACTTTCTAATCTTTGCCGCAACAAGAATCCTGCACCCCCGATAGATGCTGTTGAG CAGATTCTTCCTACCTTAGTTCGGCTCCTGCATCATGATGATCCAGAAGTGTTAGCAGATACCTGC TGGGCTATTTCCTACCTTACTGATGGTCCAAATGAACGAATTGGCATGGTGGTGAAAACAGGAGTT GTGCCCCAACTTGTGAAGCTTCTAGGAGCTTCTGAATTGCCAATTGTGACTCCTGCCCTAAGAGCC AACATCACAGCCGGCCGCCAGGACCAGATACAGCAAGTTGTGAATCATGGATTAGTCCCATTCCTT GTCAGTGTTCTCTCTAAGGCAGATTTTAAGACACAAAAGGAAGCTGTGTGGGCCGTGACCAACTAT ACCAGTGGTGGAACAGTTGAACAGATTGTGTACCTTGTTCACTGTGGCATAATAGAACCGTTGATG AACCTCTTAACTGCAAAAGATACCAAGATTATTCTGGTTATCCTGGATGCCATTTCAAATATCTTT CAGGCTGCTGAGAAACTAGGTGAAACTGAGAAACTTAGTATAATGATTGAAGAATGTGGAGGCTTA GACAAAATTGAAGCTCTACAAAACCATGAAAATGAGTCTGTGTATAAGGCTTCGTTAAGCTTAATT GAGAAGTATTTCTCTGTAGAGGAAGAGGAAGATCAAAACGTTGTACCAGAAACTACCTCTGAAGGC TACACTTTCCAAGTTCAGGATGGGGCTCCTGGGACCTTTAACTTT

>KPNB1

>Ku70

AAGACCCGGACCTTTAATACAAGTACAGCCGGTTTGCTTCTGCCTAGCGATACCAAGAGGTCTCAG
ATCTATGGGAGTCGTCAGATTATACTGGAGAAAGAGGAAACAGAAGAGCTAAAACGGTTTGATGAT
CCAGGTTTGATGCTCATGGGTTTCAAGCCGTTGGTACTGCTGAAGAAACACCATTACCTGAGGCCC
TCCCTGTTCGTGTACCCAGAGGAGTCGCTGGTGATTGGGAGCTCAACCCTGTTCAGTGCTCTGCTC
ATCAAGTGTCTGGAGAAGGAGGTTGCAGCATTGTGCAGATACACACCCCGCAGGAACATCCCTCCT
TATTTTGTGGCTTTTGGTGCCACAGGAAGAAGAGTTGGATGACCAGAAAATTCAGGTGACTCCTCCA
GGCTTCCAGCTGGTCTTTTTACCCTTTGCTGATGATAAAAGGAAGATGCCCTTTACTGAAAAAATC
ATGGCAACTCCAGAGCAGGTGGGCAAGATGAAGGCTATCGTTGAGAAGCCTTCACATACAGA
AGTGACAGCTTTGAGAACCCCGTGCTGCAGCAGCACTTCAGGAACCTGGAGGCCTTGGCCTTGGAT
TTGATGGAGCCGGAACAAGCAGTGGACCTGACATTGCCCAAGGTTGAAGCCAATAAAAGACTG
GGCTCCTTGGTGGATGAGCTTTAAGGAGCTTTTACCCACCACATTACAATCCTGAAGGGAAAGTT
ACCAAGAGAAAACACGATAATGAAGGTTCTGGAAGCCCCAAGGTGGAGTATTCACAAGAG
GAGCTGAAGACCCACATCAGCAAGGGTACGCTGGGCAAGTTCACTTGAAGCCC
TGCCGGGCTTACGGGCTGAAGAGTGGCCTGAAGAGCCC
TGCCGGGCTTACGGCCTGAAGAGCAGGCCCTCACCAAGCCC
TGCCGGGCTTACGGCCTGAAGAGTGGCCTGAAGAGCCCTCACCAAGCCC
TTCCAGGAC

>LUC7B1

>MAP11c3

>mHAP1

CCGAAAGAGCAGGTGCAGAGCGGTGCGGGAGACCGGGACAGGGGACCCAGCAGCAGCACCACC CCCACGACCCAGCCTGCAGTTGGTCCCGCTCCGGAGCCCTCGGCGGAGCCCAAACCTGCTCCAGCG CAGGGAACCGGGTCCGGACAAAAATCAGGATCCCGAACCAAGACAGGAAGCTTTTGTCGGTCCATG ATCATTGGTGATTCGGACGCACCATGGACCCGCTACGTATTCCAGGGGCCTTACGGTCCCCGGGCC ACTGGCCTGGGCACTGGAAAGGCCGAGGGAATCTGGAAGACACCAGCGGGTAGATCGGCCGGAGG CCCGCCGTGTCCGCCCTGAGCGTGCGCCGTTTATTCGAGAGCTGCAGGAAGCGTTGTGTCCTAAT CCACCACCCACGAAGAAGATCACCGAAGATGATGTCAAAGTGATGTTGTATTTGCTGGAAGAGAAA GAACGGGACCTGAACACAGCCGCCCGGATCGGCCAGTCCCTGGTGAAACAGAACAGTGTCTTGATG GAGGAGAATAATAAGCTGGAAACCATGCTGGGCTCAGCCAGGGAGGAGATTTTACATCTCCGGAAG CAGGTGAACCTGCGAGATGACCTTCTTCAGCTCTACTCAGACTCTGATGACGATGATGATGAGGAA GACGAGGAAGACGAGGAAGAGGCGAAGAGGAGGAACGAGAAGGACAGAGGGATCAAGACCAGCAG CACGACCACCCTATGGTGCCCCAAGCCACACCTAAGGCTGAGACAGCGCACCGCTGCCCACAG CTGGAAACCCTGCAGCAGAAGCTCAGGCTTCTGGAGGAAGAACGACCACCTGCGAGAGGAGGCC TCCCACCTTGACAACCTGGAGGACGAAGAGCAGATGCTCATTCTGGAATGTGTGGAGCAGTTCTCT GAAGCCAGCCAGCAGATGGCAGAGCTATCGGAAGTGCTGGTGTTGAGGCTGGAAGGCTATGAGAGG CAGCAGAAAGAGATCACTCAGCTGCAGGCCGAGATCACCAAGCTACAACAGCGTTGTCAGTCTTAT GGGGCCCAGACGGAGAAACTGCAGCAGATGCTGGCCTCAGAGAAGGGGATCCACTCGGAGAGCCTG CGAGCTGGCTCCTACATGCAGGATTATGGGAGCAGGCCTCGTGACCGCCAGGAGGATGGGAAGAGT CATCGCCAGCGCTCCTCCATGCCCGCAGGCTCTGTCACCCACTATGGATACAGTGTGCCTCTGGAT GCACTTCCAAGTTTCCCAGAGACACTGGCTGAGGAGCTCCGAACATCTCTGAGGAAGTTCATCACT GCGATGCCACCCCACCGGCTCA

>mp53

>NAG4

CGAGACCGGGTGGAGAATGAGGCAGAAAAAGATCTCCAGTGTCACGCCCCTGTGAGATTAGACTTG CCTCCTGAGAAGCCTCTCACAAGCTCTTTAGCCAAACAAGAAGAAGTAGAACAGACACCCCTTCAA GTGACTGATTTTATTGCTCCTGGCTACTCCATGATCATTAÄACACCCAATGGATTTTAGTACCATG AAAGAAAAGATCAAGAACAATGACTATCAGTCCATAGAAGAACTAAAGGATAACTTCAAACTAATG TGTACTAATGCCATGATTTACAATAAACCAGAGACCATTTATTATAAAGCTGCAAAGAAGCTGTTG CACTCAGGAATGAAAATTCTTAGCCAGGAAAGAATTCAGAGCCTGAAGCAGAGCATAGACTTCATG GCTGACTTGCAGAAAACTCGAAAGCAGAAAGATGGAACAGACACCTCACAGAGTGGGGAGGACGGA GGCTGCTGGCAGAGAGAGAGAGAGACTCTGGAGATGCCGAAGCACACGCCTTCAAGAGTCCCAGC AAAGAAAATAAAAAGAAAGACAAAGATATGCTTGAAGATAAGTTTAAAAGCAATAATTTAGAGAGA GAGCAGGAGCAGCTTGACCGCATCGTGAAGGAATCTGGAGGAAAGCTGACCAGGCGGCTTGTGAAC AGTCAGTGCGAATTTGAAAGAAGAAAACCAGATGGAACAACGACGTTGGGAGTTCTCCATCCTGTG GATCCCATTGTAGGAGAGCCAGGCTACTGCCCTGTGAGACTGGGAATGACAACTGGAAGACTTCAG TCTGGAGTGAATACTTTGCAGGGGTTCAAAGAGGATAAAAGGAACAAAGTCACTCCAGTGTTATAT TTGAATTATGGGCCCTACAGTTCTTATGCACCGCATTATGACTCCACATTTGCAAATATCAGCAAG GATGATTCTGATTTÄATCTATTCAACCTATGGGGAAGACTCTGATCTTCCAAGTGATTTCAGCATC CATGAGTTTTTGGCCACGTGCCAAGATTATCCGTATGTCATGGCAGATAGTTTACTGGATGTTTTA acaaaaggagggcattccaggaccctacaagagatggagatgtcattgcctgaagatgaaggccat actaggacactagacaccagcaaaagaaatggagattacagaagtagagccaccagggcgtttggac TCCAGTACTCAAGACAGGCTCATAGCGCTGAAAGCAGTAACAAATTTTGGCGTTCCAGTTGAAGTT TTTGACTCTGAAGAAGCTGAAATATTCCAGAAGAAACTTGATGAGACCACCAGATTGCTCAGGGAA CTCCAGGAAGCCCAGAATGAACGTTTGÁGCACCAGACCCCCCCCGAACATGATCTGTCTCTTGGGT CCCTCATACAGAGAAATGCATCTTGCTGAACAAGTGACCAATAATCTTAAAGAACTTGCACAGCAA CCCGTCATGGAAAACAACTTTGTGGATTTGACAGAAGACACTGAAGAACCTAAAAAGACGGATGTT GCTGAGTGTGGACCTGGTGGAAGT

>NEFL

CTCTCTCCCCTGTCTCTCTCCGGGCTCCCACCGCCGCGGGGGCCGGGGAGCCACCGGCCGCC ACCATGAGTTCCTTCAGCTACGAGCCGTACTACTCGACCTCCTACAAGCGGCGCTACGTGGAGACG CCCCGGTGCACATCTCCAGCGTGCGCAGCGCTACAGCACCGCACGCTCAGCTTACTCCAGCTAC TCGGCGCGGTGTCTTCCTCGCTGTCCGTGCGCCGCAGCTACTCCTCCAGCTCTGGATCGTTGATG CCCAGTCTGGAGAACCTCGACCTGAGCCAGGTAGCCGCCATCAGCAACGACCTCAAGTCCATCCGC ACGCAGGAGAAGGCGCAGCTCCAGGACCTCAATGACCGCTTCGCCAGCTTCATCGAGCGCGTGCAC GAGCTGGAGCAGCAGAACAAGGTCCTGGAAGCCGAGCTGCTGCTGCTGCCGCCAGAAGCACTCCGAG CCATCCCGCTTCCGGGCGCTGTACGAGCAGGAGATCCGCGACCTGCGCCTGGCGGCGGAAGATGCC ACCAACGAGAGCAGGCGCTCCAGGGCGAGCGCGAAGGGCTGGAGGAGACCCTGCGCAACCTGCAG GCGCGCTATGAAGAGGAGGTGCTGAGCCGCGAGGACGCCGAGGGCCGGCTGATGGAAGCGCGCAAA GGCGCCGACGAGGCGGCGCTCGCTCGCGCCGAGCTCGAGAAGCGCATCGACAGCTTGATGGACGAA ATCTCTTTTCTGAAGAAAGTGCACGAAGAGAGATCGCCGAACTGCAGGCGCAGATCCAGTACGCG CAGATCTCCGTGGAGATGGACGTGACCAAGCCCGACCTTTCCGCCGCGCTCAAGGACATCCGCGCG CAGTACGAGAAGCTGGCCGCCAAGAACATGCAGAACGCTGAGGAATGGTTCAAGAGCCGCTTCACC GAGAAGCAGCTGCAGGAGCTGGAGGACAAGCAGAACGCCGACATCAGCGCTATGCAGGACACGATC AACAAATTAGAAAATGAATTGAGGACCACAAAGAGTGAAATGGCACGATACCTAAAAGAATACCAA GACCTCCTCAACGTGAAGATGCCTTTGGATATTGAGATTGCAGCTTACAGGAAACTCTTGGAAGGC GAGGAGACCCGACTCAGTTTCACCAGCGTGGGAAGCATAACCAGTGGCTACTCCCAGAGCTCCCAG GTCTTTGGCCGATCTGCCTACGGCGGTTTACAGACCAGCTCCTATCTGATGTCCACCCGCTCCTTC CCGTCCTACTACACCAGCCATGTCCAAGAGGAGCAGATCGAAGTGGAGGAAACCATTGAGGCTGCC AAGGCTGAGGAAGCCAAGGATGAGCCCCCCTCTGAAGGAGAAGCCGAGGAGGAGGAGAAGGACAAG GAAGAGGCCGAGGAAGAGGGCAGCTGAAGAGGCAAGAAGCTGCCAAGGAAGAGTCTGAAGAAGCA AAAGAAGAAGAAGGAGGTGAAGGTGAAGAAGGAGAGAAACCAAAGAAGCTGAAGAGGAGGAG AAGAAGTTGAAGGTGCTGGGGAGGAACAAGCAGCTAAGAAGAAGAT

>p53

ATGGAGGAGCCGCAGTCAGATCCTAGCGTCGAGCCCCCTCTGAGTCAGGAAACATTTTCAGACCTA TGGAAACTACTTCCTGAAAACAACGTTCTGTCCCCCTTGCCGTCCCAAGCAATGGATGATTTGATG CTGTCCCGGACGATATTGAACAATGGTTCACTGAAGACCCAGGTCCAGATGAAGCTCCCAGAATG CCAGAGGCTGCTCCCCCGTGGCCCTGCACCAGCAGCTCCTACACCGGCGGCCCCTGCACCAGCC CCCTCCTGGCCCCTGTCATCTTCTGTCCCTTCCCAGAAAACCTACCAGGGCAGCTACGGTTTCCGT CTGGGCTTCTTGCATTCTGGGACAGCCAAGTCTGTGACTTGCACGTACTCCCCTGCCCTCAACAAG ACCCGCGTCCGCCCATGGCCATCTACAAGCAGTCACAGCACATGACGGAGGTTGTCAGGCGCTGC CCCCACCATGAGCGCTGCTCAGATAGCGATGGTCTGGCCCCTCCTCAGCATCTTATCCGAGTGGAA GGAAATTTGCGTGTGGAGTATTTGGATGACAGAAACACTTTTCGACATAGTGTGGTGGTGCCCTAT GAGCCGCCTGAGGTTGGCTCTGACTGTACCACCATCCACTACAACTACATGTGTAACAGTTCCTGC ATGGGCGGCATGAACCGGAGGCCCATCCTCACCATCATCACACTGGAAGACTCCAGTGGTAATCTA CTGGGACGGAACAGCTTTGAGGTGCGTGTTTGTGCCTGTCCTGGGAGAGACCGGCGCACAGAGGAA GAGAATCTCCGCAAGAAAGGGGAGCCTCACCACGAGCTGCCCCCAGGGAGCACTAAGCGAGCACTG CAGATCCGTGGGCGTGAGCGCTTCGAGATGTTCCGAGAGCTGAATGAGGCCTTGGAACTCAAGGAT GCCCAGGCTGGGAAGGAGCCAGGGGGGAGCAGGGCTCACTCCAGCCACCTGAAGTCCAAAAAGGGT CAGTCTACCTCCCGCCATAAAAAACTCATGTTCAAGACAGAAGGGCCTGACTCAGAC

>PFN2

GCTCCTCGCCGTCCGCGCTGCAGTGCGAAGGGCTCGAAGATGGCCGGTTGGCAGAGCTACGTGGAT
AACCTGATGTGCGATGGCTGCCAGGAGGCCGCCATTGTCGGCTACTGCGACGCCAAATACGTC
TGGGCAGCCACGGCCGGGGGCGTCTTTCAGAGCATTACGCCAATAGAAATAGATATGATTGTAGGA
AAAGACCGGGAAGGTTTCTTTACCAACGGTTTGACTCTTGGCGCGAAGAAATGCTCAGTGATCAGA
GATAGTCTATACGTCGATGGTGACTGCACAATGGACAAAGAGTCAAGGTGGGCAAAAGACCA
ACATACAATGTGGCTGTCGGCAGAGCTGGTAGAGTCTTTGTAATGGGAAAAGAACGGGTC
CATGGAGGCCGGATTGAATAAGAAGGCATACTCAATGGCAAAATACTTGAGAGACTCTGGGTTC
>PIASy(bait)

CTGGTGGAGGCCAAAAACATGGTGATGAGTTTTCGAGTCTCCGACCTTCAGATGCTCCTGGGTTTC GTGGGCCGGAGTAAGAGTGGACTGAAGCACGAGCTCGTCACCAGGGCCCTCCAGCTGGTGCAGTTT GACTGTAGCCCTGAGCTGTTCAAGAAGATCAAGGAGCTGTACGAGACCCGCTACGCCAAGAAGAAC TCGGAGCCTGCCCACAGCCGCCCCTGGACCCCTGACCATGCACTCCACCTACGACCGG GCCGCCCTGTGCCCAGGACTCCGCTGGCAGGCCCCAATATTGACTACCCCGTGCTCTACGGAAAG TACTTAAACGGACTGGGACGGTTGCCCGCCAAGACCCTCAAGCCAGAAGTCCGCCTGGTGAAGCTG CCGTTCTTTAATATGCTGGATGAGCTGCTGAAGCCCACCGAATTAGTCCCACAGAACAACGAGAAG CTTCAGGAGAGCCCGTGCATCTTCGCATTGACGCCAAGACAGGTGGAGTTGATCCGGAACTCCAGG GAACTGCAGCCCGGAGTTAAAGCCGTGCAGGTCGTCCTGAGAATCTGTTACTCAGACACCAGCTGC CCTCAGGAGGACCAGTACCCGCCCAACATCGCTGTGAAGGTCAACCACAGCTACTGCTCCGTCCCG GGCTACTACCCCTCCAATAAGCCCGGGGTGGAGCCCAAGAGGCCGTGCCGCCCCATCAACCTCACT CACCTCATGTACCTGTCCTCGGCCACCAACCGCATCACTGTCACCTGGGGGAACTACGGCAAGAGC TACTCGGTGGCCCTGTACCTGGTGCGGCAGCTGACCTCATCGGAGCTGCTGCAGAGGCTGAAGACC ATTGGGGTAAAGCACCCGGAGCTGTGCAAGGCACTGGTCAAGGAGAAGCTGCGCCTTGATCCTGAC AGCGAGATCGCCACCACCGGTGTGCGGGTGTCCCTCATCTGTCCGCTGGTGAAGATGCGGCTCTCC GTGCCCTGCCGGCAGAGACCTGCGCCCACCTGCAGTGCTTCGACGCCGTCTTCTACCTGCAGATG ATCGACGGGCTCCTCGAAGATCCTGAGCGAGTGTGAGGACGCCGACGAGATCGAGTACCTGGTG GACGGCTCGTGGTGCCCGATCCGCGCCGAAAAGGAGCGCAGCTGCAGCCCGCAGGGCGCCATCCTC GTGCTGGGCCCTCGGACGCCAATGGGCTCCTGCCCGCCCCAGCGTCAACGGGAGCGGTGCCCTG GGCAGCACGGGTGGCGGCGCCCGGTGGGCAGCATGGAGAATGGGAAGCCGGGCGCCGATGTGGTG GACCTCACGCTGGACAGCTCATCGTCCTCGGAGGATGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGAC GAGGACGAAGAGGGCCCCGGCCCAAGCGCCGCTGCCCCTTCCAGAAGGGCCTGGTGCCGGCCTGC

>PIASy(prey) CTGGTGGAGGCCAAAAACATGGTGATGAGTTTTCGAGTCTCCGACCTTCAGATGCTCCTGGGTTTC GTGGGCCGGAGTAAGAGTGGACTGAAGCACGAGCTCGTCACCAGGGCCCTCCAGCTGGTGCAGTTT GACTGTAGCCCTGAGCTGTTCAAGAAGATCAAGGAGCTGTACGAGACCCGCTACGCCAAGAAGAAC TCGGAGCCTGCCCACAGCCGCACCGGCCCCTGGACCCCTGACCATGCACTCCACCTACGACCGG Geeggegetetgeecaggacteegetgecaggccccaatattgactaccccgtgctctacggaaag TACTTAĀĀCGGĀCTĢGGĀCGGTTGCCCGCCAAGACCCTCAAĢCCĀĢĀAGTCCGCCTGGTGAAĢCTC CCGTTCTTTAATATGCTGGATGAGCTGCTGAAGCCCACCGAATTAGTCCCACAGAACAACCAGAAG CTTCAGGAGAGCCCGTGCATCTTCGCATTGACGCCAAGACAGGTGGAGTTGATCCGGAACTCCAGG GAACTGCAGCCCGGAGTTAAAGCCGTGCAGGTCGTCCTGAGAATCTGTTACTCAGACACCAGCTGC CCTCAGGAGGACCAGTACCCGCCCAACATCGCTGTGAAGGTCAACCACAGCTACTGCTCCGTCCCG GGCTACTACCCCTCCAATAAGCCCGGGGTGGAGCCCAAGAGGCCGTGCCGCCCCATCAACCTCACT CACCTCATGTACCTGTCCTCGGCCACCAACCGCATCACTGTCACCTGGGGGAACTACGGCAAGAGC TACTCGGTGGCCCTGTACCTGGTGCGGCAGCTGACCTCATCGGAGCTGCTGCAGAGGCTGAAGACC ATTGGGGTAAAGCACCCGGAGCTGTGCAAGGCACTGGTCAAGGAGAAGCTGCGCCTTGATCCTGAC AGCGAGATCGCCACCACCGGTGTGCGGGTGTCCCTCATCTGTCCGCTGGTGAAGATGCGGCTCTCC GTGCCTGCGGGCAGAGACCTGCGCCCACCTGCAGTGCTTCGACGCCGTCTTCTACCTGCAGATG ATCGACGGCTCCTCTCGAAGATCCTGAGCGAGTGTGAGGACGCCGACGAGATCGAGTACCTGGTG GACGGCTCGTGGTGCCCGATCCGCGCCGAAAAGGAGCGCAGCTGCAGCCCGCAGGGCGCCATCCTC GGCAGCACGGTGGCGGCCGGTGGGCAGCATGGAGAATGGGAAGCCGGGCGGCCGATGTGGTG GACCTCACGCTGGACAGCTCATCGTCCTCGGAGGATGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAAGAC GAGGACGAAGAGGGCCCCGGCCCAAGCGCCGCTGCCCCTTCCAGAAGGGCCTGGTGCCGGCCTGC >PLIP

GGGGAGATAATCGAGGGCTGCCGCCTACCCGTGCTGCGGGGGAACCAGGACAACGAAGATGAGTGG CCCCTGGCCGAGATCCTGAGCGTGAAGGACATCAGTGGCCGGAAGCTTTTCTACGTCCATTACATT GACTTCAACAAACGTCTGGATGAATGGGTGACGCATGAGCGGCTGGACCTAAAGAAGATCCAGTTC CCCAAGAAAGAGGCCAAGACCCCCACTAAGAACGGACTTCCTGGGTCCCGTCCTGGCTCTCCAGAG AGAGAGGTGAAACGGAAGGTGGAGGTGGTTTCACCAGCAACTCCAGTGCCCAGCGAGACAGCCCCG AAATCGAATTGTTTGGGCACTGATGAGGACTCCCAGGACAGCTCTGATGGAATACCGTCAGCACCA CGCATGACTGGCAGCCTGGTGTCTGATCGAAGCCACGACGACGTCACCCGGATGAAGAACATT GAGTGCATTGAGCTGGGCCGGCACCGCCTCAAGCCGTGGTACTTCTCCCCGTACCCACAGGAACTC ACCACATTGCCTGTCCTCTACCTGTGCGAGTTCTGCCTCAAGTACGGCCGTAGTCTCAAGTGTCTT CAGCGTCATTTGACCAAGTGTGACCTACGACATCCTCCAGGCAATGAGATTTACCGCAAGGGCACC ATCTCCTTCTTTGAGATTGATGGACGTAAGAACAAGAGTTATTCCCAGAACCTGTGTCTTTTGGCC AAGTGTTTCCTTGACCATAAGACACTGTACTATGACACAGACCCTTTCCTCTTCTACGTCATGACA TACAATGTGGCCTGCATCCTAACCCTGCCTCCCTACCAGCGCCGGGGCTACGGCAAGCTGCTGATC GAGTTCAGCTATGAACTCTCCAAAGTGGAAGGGAAACAGGGACCCCTGAGAAGCCCCTCTCAGAC CTTGGCCTCCTATCCTATCGAAGCTACTGGTCCCAGACCATCCTGGAGATCCTGATGGGGCTGAAG TCGGAGAGCGGGGAGAGCCACAGATCACCATCAATGAGATTAGTGAAATCACCAGCATCAAGAAG GAGGATGTCATCTCCACTCTGCAGTACCTCAATCTCATCAACTACTACAAGGGCCAGTACATCCTC ACACTGTCAGAGGACATCGTGGATGGCCATGAGCGGCCATGCTCAAGCGGCTCCTGCGGATCGAC TCCAAGTGTCTGCACTTCACTCCCAAGGACTGGAGCAAGAGGGGGAAGTGG

>PTN

>PTPK

AGTAACTACATCAATGCTGCTCTTATGGACAGCTACAGGCAACCAGCTGCTTTCATCGTCACACAA
TACCCTCTGCCAAACACTGTAAAAGACTTCTGGAGATTAGTGTATGATTATGGCTGTACCTCCATT
GTGATGTTAAACGAAGTCGACTTGTCCCAGGGCTGCCCTCAGTACTGGCCAGAGGAAGGGATGCTA
CGATATGGCCCCATCCAAGTGGAATGTATGTCTTGTTCAATGGACTGTGATCTAACCAGATT
TTTAGGATATGCAATCTAACAAGACCACAGGAAGGTTATCTGATGGTGCAACAGTTTCAGTACCTA
GGATGGGCTTCTCATCGAGAAGTGCCTGGATCCAAAAGGTCATTCTTGAAACTGATACTTCAGGTG
GAAAAGTGGCAGGAGAATGCGAGGAAGGGGAAGGCCGGACGATTATCCACTGCCTAAATGGTGGC
GGGCGAAGTGGCATGTTCTGTGCTATAGGCATCGTTGTTGAAATGGTGAAACGGCAAAATGTTGTC
GATGTTTTCCATGCAGTAAAGACACTGAGGAACAGCCAAACATGGTGGAAGCCCCGGAGCAA
TACCGTTTCTGCTATGATGTAGCTTTTGGAGTACCTGGAATCATCT
>SETBD1

>SH3GL3 GTTGCĀĠĀĀĀŤŤĊŤŤŤCĀĀĀĀĀĊĊĀĊŤGĀĀTĀŤCTŤCĀĠĊĊĀĀĀŤĊCĀĠĊATACĀGAGCTĀ ĀGCŤĀ GGAATĞCTGAACACTGTGTCGAAGATCCGAGGGCAGGTGAAGACCACAGGATACCCGCAGACGGAA GGCTTGCTGGGGGACTGTATGCTGAAATACGGGAAGGAGCTCGGGGAAGACTCCACCTTTGGCAAT GCATTGATAGAAGTTGGTGAATCCATGAAGCTAATGGCTGAGGTGAAAGACTCTCTTGATATTAAT GTAAAGCAAACTTTTATTGATCCACTTCAGTTACTACAAGATAAAGATTTAAAAGAGATCGGGCAT CACCTGAAAAAGCTGGAAGGCCGCCGCCTGGATTACGATTATAAAAAGAAACGAGTAGGTAAGATA CCAGACGAAGAGTCAGACAAGCGGTAGAAAATTTGAAGAGTCAAAGGGAGTTGGCTGAAAGAAGC ATGTTTAACTTTTTAGAAAATGATGTAGAACAAGTCAGCCAGTTGGCTGTGTTCATAGAGGCAGCA TTAGACTATCACAGACAGTCCACAGAGATTCTGCAGGAGCTGCAGAGCAAGCTACAGATGCGAATA TCAGCTGCATCCAGTGTCCCCAGACGACAATACAAGCCAAGGCCTGTGAAAAGGAGTTCTAGTGAG CTCAATGGACTTTCCACCACCTCTGTAGTGAAGACGACAGGTTCTAACATTCCCATGGACCAGCCC TGCTGTCGTGGTCTCTATGACTTTGAGCCAGAAAACCAAGGAGAATTAGGATTTAAAGAAGGGGAC ATCATTACATTAACCAATCAAATAGATGAAAACTGGTATGAAGGAATGATACACGGAGAATCGGGA TTCTTCCCCATTAATTACGTCGAAGTGATCGTCCCTTACCTCAG

>SUMO-2

>SUMO-3

>TAL1

AGCTCACCCGTGAAGCGTCAGAGGATGGAGTCCGCGCTGGACCAGCTCAAGCAGTTCACCACCGTG GTGGCCGACACGGGCGACTTCCACGCCATCGACGAGTACAAGCCCCAGGATGCTACCACCCAACCCG TCCCTGATCCTGGCCGCAGCACAGATGCCCGCTTACCAGGAGCTGGTGGAGGAGGCGATTGCCTAT GGCCGGAAGCTGGGCGGGTCACAAGAGGACCAGATTAAAAATGCTATTGATAAAACTTTTTGTGTTG TTTGGAGCAGAATACTAAAGAAGATTCCGGGCCGAGTATCCACAGAAGTAGACGCAAGGCTCTCC TTTGATAÁAGATGCGATGGTĞGCCAGAGCCAGGCĞĞCTCATCGAĞCTCTACAAGGAAGCTGGĞATC GCCGAGGCGGTGTGACCCTCATCTCCCCATTTGTTGTGGCGCATCCTTGATGGCATGTGACATGTGGCAAAC <u>ACCCACAAGAAATCCTATGAGCCCCTGGAAGACCCTGGGGTAAAGAGTGTCACTAAAATCTACAAC</u> TACTACAAGABGTTTAGCTACAAAACCATTGTCATGGGGGCGTGGTTGCGCAACACGGGGGGAGATC AACGCCAAGCTGGTGCCTGTGCTCTCAGCCAAGGCGGCCCAAGCCAGTGACCTGGAAAAAATCCAC CTGGATGAGAGTCTTTCCGTTGGTTGCACAACGAGGACAAGATGGCTGTGGAGAAGCTCTCTGAC GCAGAGAATGGAAAG

>VIM

TCCGGGAGCCAGTCCGCGCCACCGCCGCCGCCCAGGCCATCGCCACCCTCCGCAGCCATGTCCACC AGGTCCGTGTCCTCCTACCGCAGGATGTTCGGCGGCCCGGGCACCGCGAGCCGAGC TCCAGCCGGAGCTACGTGACTACGTCCACCCGCACCTACAGCCTGGGCAGCGCGCTGCGCCCCAGC ACCAGCCGCAGCCTCTACGCCTCGTCCCCGGGCGCGCGTGTATGCCACGCGCTCCTCTGCCGTGCGC CTGCGGAGCAGCGTGCCCGGGGTGCGGCTCCTGCAGGACTCGGTGGACTTCTCGCTGGCCGACGCC ATCAACACCGAGTTCAAGAACACCCGCACCAACGAGAAGGTGGAGCTGCAGGAGCTGAATGACCGC TTCGCCAACTACATCGACAAGGTGCGCTTCCTGGAGCAGCAGAATAAGATCCTGCTGGCCGAGCTC GAGCAGCTCAAGGGCCAAGGCAAGTCGCGCCTGGGGGACCTCTACGAGGAGGAGATGCGGGAGCTG CGCCGGCAGGTGGACCAGCTAACCAACGACAAAGCCCGCGTCGAGGTGGAGCGCGACAACCTGGCC ACCCTGCAATCTTTCAGACAGGATGTTGACAATGCGTCTCTGGCACGTCTTGACCTTGAACGCAAA GTGCAATCTTTGCAAGAAGAGATTGCCTTTTTGAAGAAACTCCACGAAGAGAGAAATCCAGGAGCTG CAGGCTCAGATTCAGGAACAGCATGTCCAAATCGATGTGGATGTTTCCAAGCCTGACCTCACGGCT GCCCTGCGTGACGTACGTCAGCAATATGAAAGTGTGGCTGCCAAGAACCTGCAGGAGGCAGAAGAA TGGTACAAATCCAAGTTTGCTGACCTCTCTGAGGCTGCCAACCGGAACAATGACGCCCTGCGCCAG GCAAAGCAGGAGTCCACTGAGTACCGGAGACAGGTGCAGTCCCTCACCTGTGAAGTGGATGCCCTT AAAGGAACCAATGAGTCCCTGGAACGCCAGATGCGTGAAATGGAAGAGAACTTTGCCGTTGAAGCT GCTAACTACCAAGACACTATTGGCCGCCTGCAGGATGAGATTCAGAATATGAAGGAGGAAATGGCT CGTCACCTTCGTGAATACCAAGACCTGCTCAATGTTAAGATGGCCCTTGACATTGAGATTGCCACC TACAGGAAGCTGCTGGAAGGCGAGGAGCAGGATTTCTCTGCCTCTTCCAAACTTTTCCTCCCTG AACCTGAGGGAAACTAATCTGGATTCACTCCCTCTGGTTGATACCCACTCAAAAAGGACACTTCTG ATTAAGACGGTTGAAACTAGAGATGGACAGGTTATCAACGAAACTTCTCAGCATCACGATGACCTT

>ZHX1

GAATCTACAGAAGTTTCTTCTGGGGAATATCTATCAGTAAAACTCCTATCATGAAAATGATGAAA AATAAAGTGGAAAATAAACGGATTGCAGTTCATCATAACTCAGTTGAGGACGTTCCTGAAGAAAA GAGAATGAAATCAAACCAGACCGTGAAGAAATTGTAGAAAATCCAAGTTCTTCAGCTTCTGAATCT AATACAAGTACTTCCATTGTAAACAGAATACATCCAAGTACTGCCAGCACGGTAGTGACACCAGCA GCAGTTCTTCCTGGATTGGCACAGGTGATAACTGCTGTATCTGCTCAGCAGAATTCTAATTTGATT CCCAAAGTCTTAATCCCTGTTAATAGCATTCCCACCTACAATGCTGCATTGGATAACAATCCCCTT GCAAAATATACAGAGGAACAGATCAAGATATGGTTTTCAGCCCAACGTTTAAAACATGGTGTTAGT TGGACTCCCGAGGAAGTAGAGGAGGCAAGAAGGAAACAATTCAATGGAACAGTGCATACTGTACCT CAGACCATAACTGTTATTCCTACACACATTTCCACAGGGAGTAATGGTTTACCATCTATTTTACAG GTTACAGCACCTATAGCCTTGACAGTGGCAGGCGTTCCAAGTCAAAATAATATACAGAAAAGTCAG GTACCTGCTGCTCAGCCTACTGCAGAAACAAAGCCAGCAACAGCAGCAGCTTCCAACTŢCTCAAAGT GTCAAACATGAAACTGCATTGGTAAACCCTGATTCATTTGGCATTCGGGCAAAAAAAGACAAAAAGAG CAACTGGCAGAATTAAAAGTTAGCTACCTTAAAAATCAGTTTCCCCATGATTCAGAAATTATCAGA CTTATGAAAATAACAGGCCTGACGAAAGGAGAGATTAAAAAATGGTTTAGTGACACAAGGTACAAC CAGAGAAATTCAAAGAGTAATCAGTGCTTACATCTCAACAATGATTCCTCTACCACCATTATTATA GACTCCAGTGATGAAACCACGGAATCCCCAACTGTTGGTACTGCACAGCCTAAGCAATCCTGGAAT CCTTTTCCTGACTTTACTCCCCAAAAGTTTAAAGAGAAAACTGCAGAGCAGCTTCGTGTCCTTCAG GCAAGTTTTCTCAACAGCTCTGTACTTACAGATGAAGAATTAAATAGGTTAAGGGCACAAACCAAA CTTACCAGAAGAGAAATCGATGCTTGGTTTACAGAGAAGAAGAAATCAAAAGCTTTAAAGGAAGAG AAAATGGAAATAGATGAAAGTAATGCAGGTAGTTCCAAAGAAGAAGCTGGAGAAACTTCTCCTGCA GATGAATCTGGTGCACCTAAGTCAGGGAGTACAGGCAAGATATGTAAAAAAACACCTGAGCAGCTG CACATGCTTAAGAGTGCATTTGTCCGGACACAGTGGCCATCACCAGAAGAGTATGACAAGTTGGCC AAAGAAAGCGGGCTTGCTAGAACAGACATAGTTAGTTGGTTTGGGGACACCCGTTATGCTTGGAAG AGAGGAAGCAAAAGAATTAACAACTGGGACAGGGGACCATCACTCATAAAATTTAAAACTGGAACT GCAATACTTAAGGATTATTACCTGAAGCACAAGTTTCTTAATGAGCAAGACCTTGATGAACTTGTT AACAAATCACATATGGGCTATGAGCAGGTCAGAGAGTGGTTTGCAGAAAGACAGAGAAGATCAGAA GAAGAACAAACAGATGATAGTGACACTTGGGAACCTCCACGACATGTGAAAACGGAAGCTGTCTAAA TCAGATGAC

>ZNF33B

Nucleotide sequence data (fasta format)

>GDF9

>GAPD

CCTGTTCGACAGTCAGCCGCATCTTCTTTTGCGTCGCCAGCCGAGCCACATCGCTCAGACACCATGGGGAAGGTG
AAGGTCGAGTCAACGGATTTGGTCGTATTGGGCGCCTGGTCACCAGGGCTGCTTTTAACTCTGGTAAAGTGGAT
ATTGTTGCCATCAATGACCCCTTCATTGACCTCAACTACATGGTTTACATGTTCCAATATGATTCCACCCATGGC
AAATTCCATGGCACCGTCAAGGCTGAGAACGGGAAGCTTGTCATCAATGGAAATCCCATCACCATCTTCCAGGAG
CGAGATCCCTCCAAAATCAAGTGGGGCGATGCTGGCGCTGAGTACGTCGTGGAGTCCACTGGCGTCTTCACCACC
ATGGAGAAGGCTGGGGGCTCATTTGCAGGGGGGAGCCAAAAGGGTCATCATCTCTGCCCCCTCTGCTGCACCCC
ATGTTCGTCATGGGTGTGAACCATGAGAAGTATGACAACAGCCTCAAGATCATCAGCAATGCCTCCTGCACCACC
AACTGCTTAGCACCCCTGGCCAAGGTCATCCATGACAACTTTGGTATCGTGGAAGGACTCATGACCACAGTCCAT
GCCATCACTGCCACCCAGAAGACTGTGGATGGCCCCTCCGGGAAACTGTGGCGTGATGGCCGCGGGGCTCTCCAG
AACATCATCCCTGCCTCTACTGGCGCTGCCAAGGCTGTGGGCAAGGTCATCCCTGAGCTGAACAGGAAGCTCACT
GGCATGGCCTTCCGTGTCCCCACTGCCAACGTGTCAGTGGTGGACCTGCCGTCTAGAAAAACCCTGCCAAA
TATGATGACATCAAGAAGGTGGTGAAGCAGGCGTCGGAGGGCCCCCTCAAGGGCATCCTGGGCTACACTGAGCAC
CAGGTGGTCTCCTCTGACTTCAACAGCGACACCCACTCCTCCACCTTTGACGCTGGGCTTGGCCATTGCCCTCAAC
GACCACTTTGTCAAGGCTCATTTCCTGGTATGACAACGAATTTGGCTACAGCAACAGGGTGGTGGACCTCATGGCC
CACATGGCCTCCAAGGAG

>MOV34

Protein sequence data (fasta format)

->GDF9

HSWYSLHYKRRPSQGPDQERSLSAYPVGEEAAEDGRSSHHRHRRGQETVSSELKKPLGPASFNLSEYFRQFLLPQ NECELHDFRLSFSQLKWDNWIVAPHRYNPRYCKGDCPRAVGHRYGSPVHTMVQNIIYEKLDSSVPRPSCVPAKYS PLSVLTIEPDGSIAYKEYEDMIATKCTCR

>GAPD

PVRQSAASSFASPAEPHRSDTMGKVKVGVNGFGRIGRLVTRAAFNSGKVDIVAINDPFIDLNYMVYMFQYDSTHG KFHGTVKAENGKLVINGNPITIFQERDPSKIKWGDAGAEYVVESTGVFTTMEKAGAHLQGGAKRVIISAPSADAP MFVMGVNHEKYDNSLKIISNASCTTNCLAPLAKVIHDNFGIVEGLMTTVHAITATQKTVDGPSGKLWRDGRGALQ NIIPASTGAAKAVGKVIPELNGKLTGMAFRVPTANVSVVDLTCRLEKPAKYDDIKKVVKQASEGPLKGILGYTEH QVVSSDFNSDTHSSTFDAGAGIALNDHFVKLISWYDNEFGYSNRVVDLMAHMASKE

>MOV34

AAAAAAAATNGTGGSSGMEVDAAVVPSVMACGVTGSVSVALHPLVILNISDHWIRMRSQEGRPVQVIGALIGKQ EGRNIEVMNSFELLSHTVEEKIIIDKEYYYTKEEQFKQVFKELEFLGWYTTGGPPDPSDIHVHKQVCEIIESPLF LKLNPMTKHTDATMLFAELTYTLATEËAERIGVDHVARMTATGSGENSTVAEHLIAQHSAIKMLHSRVKLILEYV KASEAGEVPFNHEILREAYALCHCLPVLSTDKFKTDFYDQCNDVGLMAYLGTITKTCNTMNQFVNKFNVLYDRQG IGRRMRGLFF

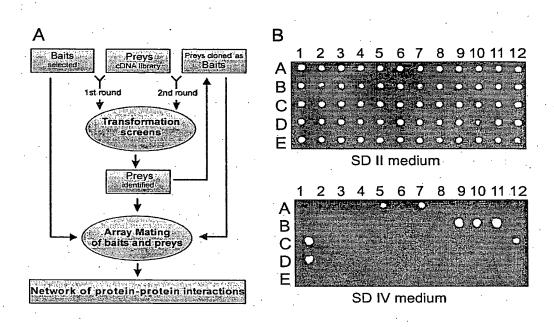
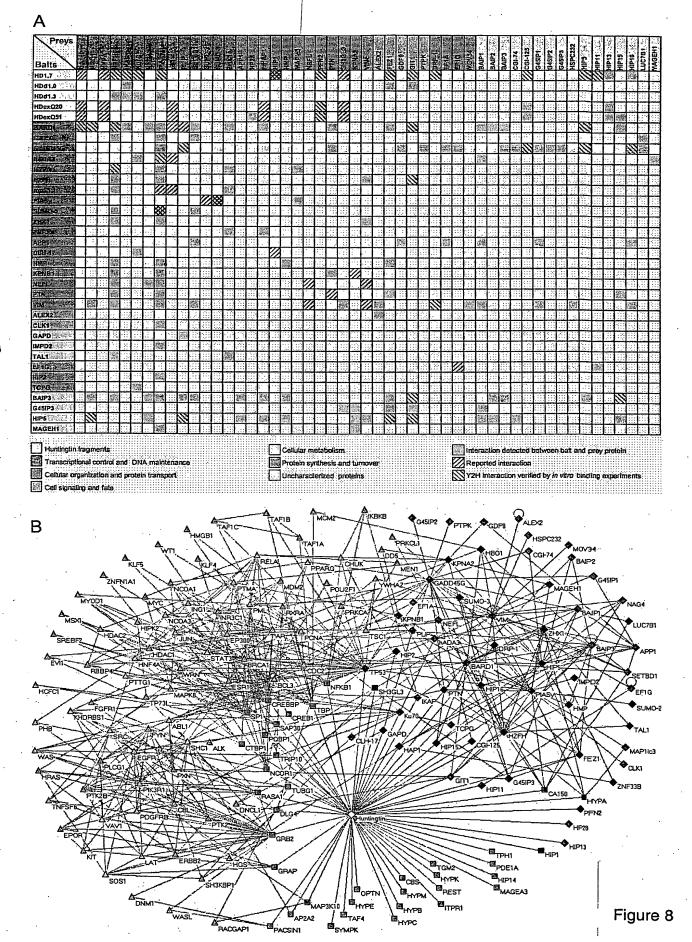
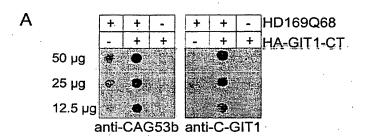


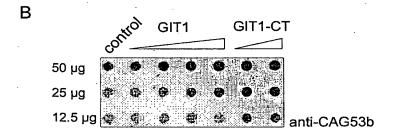
Figure 7

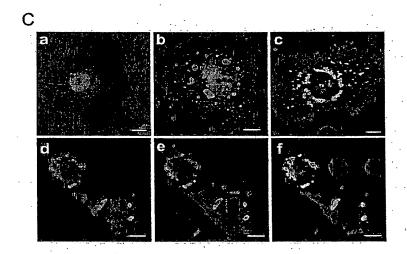


		ie "Wegar
		"Hear ale on with
GST-	pulled	Deale New Strate of My
fusion	protein	200 Q2 Q2 M2
CGI-125	HD510Q17	
DRP-1	HD510Q17	
FEZ1	HD510Q17	
GIT1	HD510Q17	
HZFH	HD510Q17	
HIP11	HD510Q17	
HIP1	HD510Q17	
IKAP	HD510Q17	
Ku70.	HD510Q17	
PFN2	HD510Q17	
PIASy	HD510Q17	
HIP5	HD510Q68	\$ V = -
BARD1	GIT1	
HIP5	GIT1	_6
HZFH	GIT1	
HIP15	BAIP3	لين ا
GIT1	BAIP3	
HIP5	HBO1	
BARD1	HBO1	
BARD1	HJP5	SAN TOPACE
GADD45G	HIP5	
SUMO-3	PIASy	· (ES)
hADA3	PIASy	
HIP5	PLIP	
GADD45G	PLIP	
BARD1	CA150	
BARD1	HZFH	
GADD45G	HIP16	
HZFH	HYPA	
HIP5	FEZ1	
CGI-125	GADD45G	
DRP-1	VIM	

Figure 9







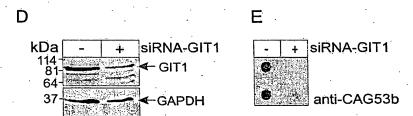
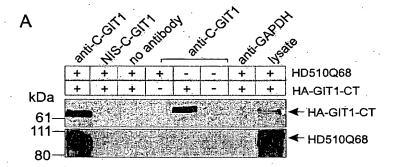
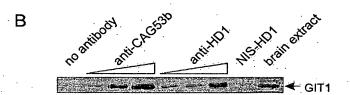


Figure 10





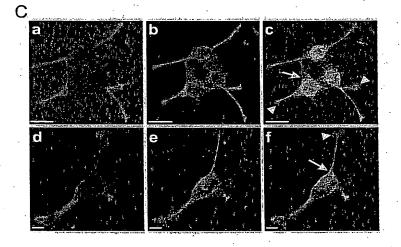


Figure 11

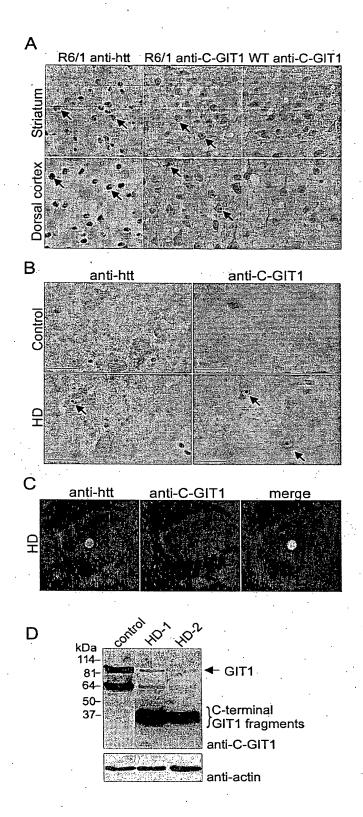
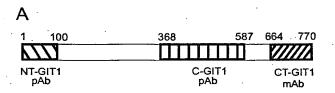


Figure 12

Q



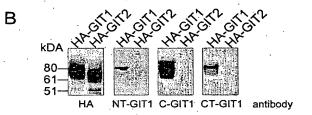


Figure 13